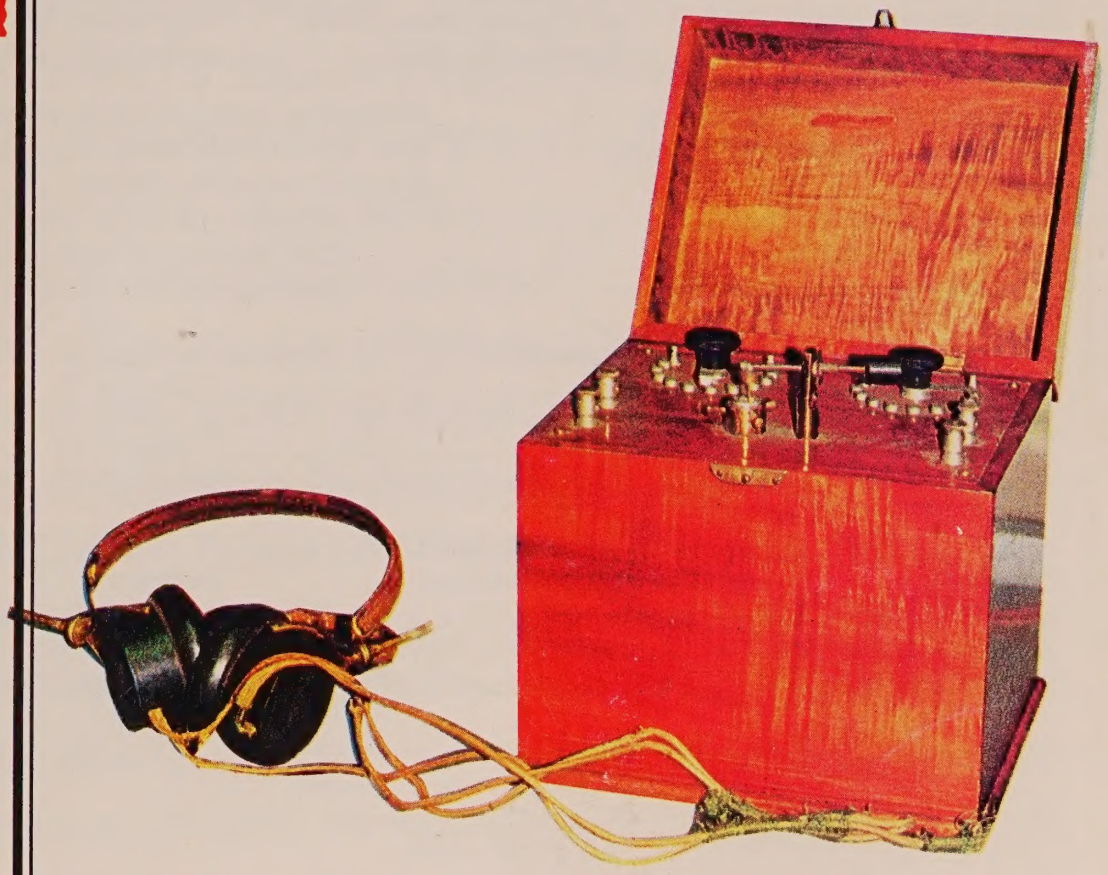
THE ANTIQUE RADIO GAZETTE

Seasons Greetings and Aloha!



Mr. A. R. Tinker was creator of the homebrew "Koa" wood cabinet crystal radio (constructed circa 1922). He was manager of the Pacific Cable Company on Midway Island. A recent news article about Midway Island is included in this issue. The Koa wood material was more than likely imported from Hawaii.

ARCA

20TH ANNIVERSARY YEAR

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President's Page

by Lloyd McIntyre

We always like to set back and reflect just a little, as we close out another year. What we have accomplished, as compared to what our goals may have been.

In the fast-paced world of radio collecting and preservation, it is now difficult to set an exact blueprint for a given year. I look at the expanded membership of ARCA, the growing number of chapters, and ARCA's involvement in a number of different events, and realize you have to multiply that several times over to get a picture of where we are.

This is a good time of the year to plan for 1993. ARCA alone will be involved in many different club events this year. The first of which is a joint *Spring Fever* event sponsored by the Mid-Atlantic Antique Radio Club, Pittsburgh Antique Radio Society, West Virginia Chapter of ARCA and Museum of Radio & Technology, Inc.

This event was designed to eliminate the problems of space that has become scarce around hotels for flea markets, the problem of hookups for campers, and the unpredictable weather that can turn an event into a nightmare of damaged radios and waterlogged parts and historical documents.

We have an opportunity here to establish an annual event that will keep our hobby within the control of the membership, and allow for expansion to a multiple event schedule, if the participants so desire. Something in the order of a Dayton Hamfest on a small scale.

Washington, Pennsylvania, is located at the crossroads of the nation and provides easy access within just four hours or less to over 70 million people. These are exciting concepts and it is up to us to move in this direction. The 1992 year saw auctions and flea markets conducted by dealers who have no relationship to the hobby, except for the money to be made. Look for information elsewhere in this issue on this event.

The world and the nation have seen great change this past year and we will surely see more of the same in 1993. I hope the change will be all for the best, and our radio society will grow, and everyone can have a better understanding of our goals as caretakers of this important part of history.

I look forward to meeting as many of you as possible this coming year. Your contributions to *The Gazette* have made it one of the best magazines in the country and your future contributions will enhance the growth of the magazine and your club.

The best to you and your family during the coming year. Patti and I pray all will have the health and prosperity that will make 1993 a pleasant memory for you and yours! ■

Radio History Modern Radio Laboratories

by Dick Mackiewicz, Member #271

Here's a question for all you radio historians. What is the oldest United States mail order radio company, still in business, offering mostly crystal sets, crystal set parts, and handbooks on such things as crystal detectors, headphones, coil winding - information most of you thought was no longer available?

Well, our introduction gave away the answer - Modern Radio Laboratories. I became acquainted with MRL through their small ads in Popular Science back in the late 40's. I sent away nickels, dimes and quarters for hundreds of feet of double cotton covered wire, which I used to wind countless coils on toilet tissue tubes, oatmeal boxes - virtually any round piece of cardboard I came across. I bought tap switches, switch points, crystals, cat's whiskers and MRL's famous Radio Builder Handbooks. I made one crystal set after another. I remember seeing MRL's ads, probably through the 1970's, and then lost track of them.

What is the oldest United States mail order radio company, still in business, offering mostly crystal sets, crystal set parts, and handbooks on such things as crystal detectors, headphones, coil winding - information most of you thought was no longer available?

MRL was started in 1932 by Elmer G. Osterhoudt. Elmer was born around 1899, and here is a brief history of his accomplishments since 1915: Radio Operator, RCA Marine Service. Radio Mechanic, Maximum, U. S. Navy. Technician, Electrical Products Corp., Southern Calif. Edison, Majestic Electrical Products, U. S. Motor Co., Manchester Radio Elec. Shop, MRL - amateur radio 6NW, licensed 1919!

Elmer served as a shipboard radio operator in the age of the spark gap transmitters and crystal detector receivers. He really got a strong start in radio in the early 1930's, when he borrowed $640 from his father, a carpenter, who built Elmer's first Manchester Radio Shop! Elmer went on to own and operate six more radio shops in California.

He once thought of a different career - pharmacy, and completed many of the courses necessary for this profession. While studying pharmacy, he learned a great deal about crystalline structures, which, when combined with his general radio knowledge, made him an expert in crystal set construction. MRL's #2 crystal set is often looked at as the "benchmark" of home constructed sets.

Elmer returned to school during the war in the 40's, and may have been a radio instructor for other

MRL, *continued from page 3*

wartime radio technicians and operators. He subsequently sold all the Manchester Radio stores, and devoted his time to the mail order business, Modern Radio Laboratories. He moved the business several times, and historians may find as many addresses for MRL as they do Philmore. (I understand there were 17 moves in 56 years.)

I thought MRL, as other crystal set suppliers, had simply disappeared until a few years ago, when I started corresponding with Richard Spratley, (NEARC Member #713) in Virginia. Richard told me that MRL was now being operated by a Mr. Paul Nelson. I have corresponded with Paul, and discovered the following: In 1978, one of Paul's friends, a young girl (!!!), brought a crystal set to school. Her father had made it for a science fair project. Paul immediately became interested, but found crystal set parts difficult to find at local radio stores. Another friend told Paul about MRL, and Paul, like myself, began buying parts from Elmer, and developed a correspondence with him.

Elmer was involved in a severe auto accident in 1986, and never recovered. Paul visited Elmer during his convalescence and expressed interest in carrying on Elmer's business. Elmer and his family liked Paul a great deal, and when Elmer passed away in 1987, Paul bought Elmer's business and moved it to its present location in Minnesota.

Where else can you still buy a crystal set kit to build on an oatmeal box? (You furnish the box!) How about mounted crystals - galena, silicon, iron pyrites, carborundum? Variometers, busbar, eyelets, cotton covered wire - AND the famous #2 crystal set kit!

Don't try to order a hundred of these things. You will wait in line. Paul still does business as Elmer did. The young boys, the beginners, the hobbyists who order one or two at a time will get their orders filled first.

You may have to wait for coil sliders. Paul still makes most items very carefully and painstakingly, by hand! But, when you receive these items, you will go back in time, and wonder, as I did, how anyone can still make such faithfully reproduced parts.

Modern Radio Laboratories is now in their 60th year of continuous service . . .

Modern Radio Laboratories is now in their 60th year of continuous service to those of us who still enjoy Real Old Time, no batteries, no tubes, challenging, and satisfying "I made it work" radio!

Write to Paul Nelson at:

Modern Radio Laboratories
P. O. Box 14902
Minneapolis, MN 55414

Please send Paul a dollar or two to cover the cost of his catalog and postage. ■

Remembering The Good Ol' Days Of TV

40 Years of Tube History on Display at All-Collectors Show

By Will Hoover, Staff Writer
The Honolulu Advertiser, Friday, July 13, 1992

". . . I predict the day will come when you in Hawaii can sit in your parlor and watch a football game being played in New Haven or in Los Angeles. I, in my parlor in New York, will watch surfboard riding at Waikiki." - C. A. Richards, President, US Radio & Television Co., 1932.

The beginning of the end of radio days in Hawaii occurred at 5:05 p.m., Dec. 1, 1952. At that moment, a startled-looking KGMB announcer, Carl Hebenstreit (better known as "Kini Popo"), uttered, "Hello, everybody," to thousands of gawking viewers clustered around television "receivers" in dozens of Oahu homes and appliance dealer showrooms.

With that, the television age flickered to life in Hawaii, 40 years

(continued on page ??)

E. H. Scott Historical Society, Inc.

The E. H. Scott Historical Society (EHSHS), a non-profit tax exempt corporation, was founded January 27, 1992 and is dedicated to the preservation of the history and radios of the E. H. Scott Radio Laboratories (formerly the Scott Transformer Company) which existed in Chicago, Illinois from 1925-1953.

The primary goals of the EHSHS are: (1) the education of the public in regard to the history of this company and E. H. Scott; (2) to provide a forum for the documentation and preservation of E. H. Scott radios; (3) to develop a collection of E. H. Scott radios, memorabilia and related items, based primarily upon donations, for public display and education; (4) to develop an institution devoted to the procurement, care, study, and public display of such a collection.

We are now accepting memberships and donations and want to encourage anyone with an interest in E. H. Scott and/or his radios to join the EHSHS. As an EHSHS member you will also receive our quarterly newsletter, the SCOTT NEWS. Each issues will include articles of interest to E. H. Scott collectors, including repair and restoration hints, as well as historical articles and more. Membership in the EHSHS is only $20/year, prorated to the time of the year you join. All memberships expire the last day of each year. To receive a membership application, to make a donation or for further information write: E. H. Scott Historical Society, Inc., P. O. Box 1070, Niceville, FL 32588-1070. We thank all of you for your interest and support. ■

GOOD OL' DAYS OF TV
(cont. from page 5)

ago this year. Nothing would ever be the same again.

Hawaii "firsts" came in rapid succession that evening.

• First commercially sponsored television show: Hopalong Cassidy, paid for by Love's Bakery.

• First televised movie: Frank Capra's 1941 social commentary, "Meet John Doe," starring Gary Cooper and Barbara Stanwyck.

• First TV station technical difficulty: Hebenstreit was supposed to go on the air at 5 p.m. sharp, but five minutes were blown on a frantic scramble to locate KGMB's lost program log.

• First television "first" dispute: While KGMB claimed Hawaii's first televised program on Dec. 1, station KONA claimed Hawaii's first test pattern on Nov. 17. (To this day, though, there are whose who swear the first *real* live broadcast was of a man's hairy arm that appeared on screen one November night when the test pattern card tipped over.)

In celebration of TV's 40th anniversary in the mid-Pacific, the local chapter of the Antique Radio Collector Association will present a History of Television in Hawaii display during the Hawaii All-collectors Show '92 at the Blaisdell Exhibition Center today through Sunday.

In addition to focusing on vintage Hawaii TV programs, the association plans to bring in one-time TV host "Sheriff Ken" Alford (who'll be giving away six original Sheriff Ken Ranger membership cards), and perhaps other personalities from the colorful black-and-white past.

"We're going to have lots of old local TV memorabilia," said Leonard Chung, president of the association's Hawaii chapter. "We'll be showing some actual old footage of programs shot in Hawaii. We're hoping to get an old kinescope of Kini Popo (who hosted a variety show). We've got some wonderful old stills of programs like 'Conversations,' an early talk show starring Betty Smyser.

"This is world history, really. It's something we can all relate to. The introduction of TV was as profound as landing a man on the moon. Radio, and then television, have influenced the way society thinks today."

Wayne Maeda, co-producer of the All-Collector's Show '92 and the man who researched the TV display, tracked down eye witnesses to those first days of TV in Hawaii.

"One guy I talked to claims he still has the TV set he watched that first broadcast on," said Maeda. "I actually found a lady who was selling Philco TV sets back then.

"I talked to a guy who says late one night - this was before the Dec. 1 broadcast - he was sitting around watching the test pattern like he did each evening, and all of a sudden an old Joe Palooka movie came on and ran for about 15 minutes. Apparently, the studio was testing its equipment."

(Continued on Page 7)

Good Ol' Days of TV
(cont. from page 6)

The allure of the mysterious tube - which Mainlanders had been watching since the late '40s - was instantaneous in Hawaii. Black-and-white television sales here skyrocketed from "hundreds" on Dec. 1 to an estimated 6,500 sets two weeks later. Experts boldly predicted 80,000 TV's in Hawaii within two years, even though viewers would be forced to watch delayed Mainland shows until TV satellites came along in the mid-1960's.

It's not as though some viewers hadn't had a head start. A year and a half before that first broadcast. Howard O. Gaston of Halawa installed Hawaii's first television antenna on his roof so friends and neighbors could crowd around his den of an evening and watch "snow" interference on his 16-inch console.

"This is world history, really. It's something we can all relate to."

The first actual TV set was introduced to Hawaii three years before that by the Easy Appliance Co. The thing was carted to the 49th State Fair where it became a runaway sensation.

But who could have predicted what was to come?

"I talked to this one lady who said her auntie declared, "This is just a fad! TV will never last!" Madea said.

"Then the auntie and her family came over to the house and watched TV every night till it went off the air." ■

A Legend In Radio History

From 1921 to 1936, Arthur Atwater Kent, Dr. Lee DeForest, Powel Crosley, Clarence D. Tuska, Charles Freshman, Colin B. Kennedy, A. H. Grebe and David Sarnoff were all building radios. Today, these names are all legends in the history of radio.

In 1921, there was another young man who found that building radios was not only a fascinating hobby but also a profitable business to get into. Unlike most of his contemporaries, he married only once, he never went bankrupt, never sued anyone, and never stood on top of the RCA transmitting tower. He does, however, have the distinction of being a survivor; at age 86, and after 72 years of continuous involvement with the hobby, he is still building beautiful radios much like Atwater Kent produced in the early 1920s.

As proof of my story, please observe the unusual breadboard recently built by none other than Mr. Mel Comer.

—Submitted by Ron Frisbie

(See photos on page 27)

Premier Electric Company Prototype?

The complete receiving set consists of two separate panels mounted in the same cabinet. The left unit is the detector and one stage of audio. It was designed for headphone use and provides jacks to use three headphones simultaneously. The right unit is a two-step audio amplifier with jacks for selecting one or both stages of amplification. The obvious intent was to market these two units as you see them here, or in separate cabinets (much like the Radiola "RA" and "DA" or "RC").

Note the ingenious method of wire connections to the panels: panel screws are screwed into tapped, feed-through conductors. These connect the battery, antenna, and ground to the panels and provide the panel interconnections. The panels may be removed for service without removing any wires!!

This factory-built set was manufactured about 1921. It uses a regenerative detector and three-step audio amplifier. The set is of a very high quality, incorporating all Premier Electric Company parts except for the audio transformers which are United Manufacturing Co.

It is curious to note that it appears to never have had a model number or license notice plate attached anywhere on the set.

Although it appears to be a production-run set, it could be a final prototype. The component layout and construction are excellent, and it performs well.

No mention or advertising of this set can be found, and it quite possibly is the only example in existence. ■

(See Photo on Page 26)

The Peak of Quality

Premier Parts, with many newly improved and refined features, which make for greater efficiency and convenience, represent the very highest of quality in Radio apparatus.

PREMIER PARTS

are designed for use in every known "hook-up." By standardizing on Premier, you are assured of the utmost in Radio reception.

Good Dealers Sell Premier Parts—Lots of Them!

Ask for Them by Name

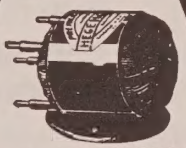
A number of well known items in the Premier Line are listed here. It will pay you, however, to send for our Bulletin No. 94, which gives detailed description of the entire line. It will be sent FREE on request.

FREE "HOOK-UPS"

We have ready for distribution individual diagrams of each of the most popular "hook-ups," including Harkness Reflex, Neutrodyne, Super-Heterodyne, Tuned Radio Frequency, Regenerative, etc.

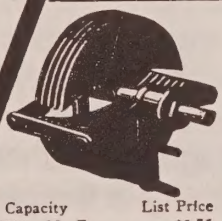
They Are *FREE* for the Asking

LITTLE BUT MIGHTY



Premier "HEGEHOG" Audio Transformer

Smallest Audio-Transformer made, and yet the most efficient for volume and tone quality (about the size of an English walnut). Gives maximum reproduction volume — minimum distortion. 100% shielded. New patented design makes this possible. Mounts anywhere—saves space in assembly. Ratios 1-3, 1-4, 1-5, $3.50. 1 to 10, $4.50.



The Newest Wonder

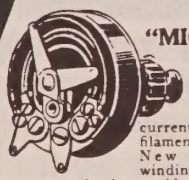
Premier "CROFOOT" Vario Condenser

"The Condenser with the Red Stripe"

A real achievement in scientific engineering. It has the greatest tuning ratio and the widest tuning range of any standard condenser yet made. Capacity .0005 M. F. has minimum (full out) capacity of only .000007 M. F., with a tuning ratio of 1 : 74. Light, compact, and small size. 3 inches in dia., weight 11 oz. In operating efficiency it is unexcelled.

Capacity	List Price
.0001 M. F.	$2.75
.00025 M. F.	3.25
.00035 M. F.	3.50
.0005 M. F.	3.75

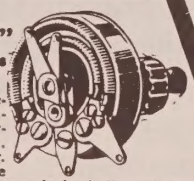
VERNIER TYPES COMPLETE WITH "EZTOON" DIAL 75 CENTS EXTRA



Premier "MICROSTAT" Super-Vernier Rheostat

Gives perfect control of the current delivered to the filament of radio tubes. New principle—two windings in parallel; one 6 ohm, other 40 ohms. Absolutely noiseless. Infinite control—handles any tube. "Nichrome" wire wound. Capacity 3 amperes. Bakelite moulded—silver etched dial. One hole mounting. New Reduced Price, $2.50.

Premier "DUOSTAT" Two Rheostats in One



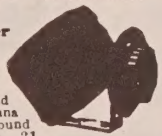
Windings independent of one another. Each operates one tube. Simplifies wiring. Base Bakelite moulded dial silver etched, winding "Nichrome" wire. Made for all types of tubes. No. 12, two windings, each 7 ohms; No. 13, two windings, each 25 ohms; No. 14, two windings, each 40 ohms. New Reduced Price, $2.50.

Premier "Double-Disconnect" Potentiometer

Double circuit breaker automatically disconnects A and B battery circuits, thus positively eliminating A battery drain (as heretofore present in all Potentiometers) and absolutely prevents accidental burning out tubes with B battery voltage. Genuine "Nichrome" wire wound. Bakelite base. Silver etched dial. Price: 250 ohm, $2.50; 400 ohm, $2.50; 500 ohm, $2.50.

Premier "Micrometer" Vario-Coupler

Highly Selective



180-degree orientation and 20 Antenna Taps. Wound with No. 21 single silk wire. Eighty turns on stator—55 on rotor. Wave lengths range 150 to 800 meters. All metal parts brass—stays "put" at any angle. Bakelite button on each tap wire, permitting easy, safe soldering.

The New Premier "LO-LOSS Tube Socket

Has the lowest leakage to radio frequency current of any bakelite socket. Ideal for radio frequency. Molded bakelite base. Minimum capacity between terminals. Self-cleaning one piece contact springs. Maximum spring deflection without set. Cam action bayonet lock. Smooth as silk. Visual contact inspection. Made for both Standard and U. V. 199 Tubes. Price 90c.

Premier Electric Company

Established 1905

3805 Ravenswood Avenue **Chicago, Illinois**

Comments on "Bring Filter Condensers Back to Life"^

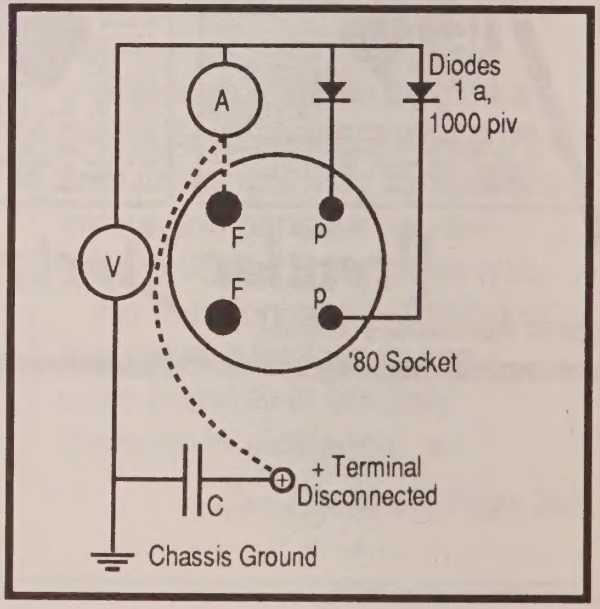
by B. M. Brown, Monroeville AL 36460

The first comment concerning Carl Creque's method of restoring old capacitors should include comments about the desirability of ever trying to use an old capacitor in restoring an old receiver. In my view all electrolytic capacitors should be replaced: A power transformer can be destroyed in a few minutes following a capacitor failure: the transformer will usually fail before the rectifier tube. One should remember that replacement transformers are expensive compared to filter capacitors and they do not fit the holes punched in the chassis for the original, and one can just leave the old capacitor cans on the chassis and hang modern ones underneath.

With that off my chest there are further comments: the time required for restoration seems excessive to me. It did not take a month to form the film in the original manufacture of the capacitor. A slight modification of the procedure, the introduction of a method for monitoring the progress, will significantly reduce the time involved and also give some confidence that the restoration has succeeded. The new procedure is described below. I have run a half dozen capacitors manufactured in the 1940's through the procedure and those successfully restored were subsequently operated at their rated potential differences for over two weeks with no failures.

The first difficulty confronted in Mr. Creque's procedure is that the rectifier tube filament is not hot enough to provide a current for depositing the insulating layer until the variable transformer output reaches about 50 volts. Nothing happens therefore until this voltage is reached. The second difficulty is the plating current is not monitored so that one has no idea when the potential difference may be increased safely.

Two methods for improvement are suggested: (a) Remove all the bleeder paths involving tubes and use solid state diodes in place of the rectifier tube, or (2) Isolate the capacitors and use the solid state diodes in place of the rectifier tube. Both methods provide a way



^Carl Creque, Antique Radio Gazette, Vol. 10, No. 2 (1992)

Filter Condensers

continued from page ??

to monitor the progress being made. In the second method, the restoration procedure can be accomplished in less than an hour. If the first method is feasible, it can be accomplished in a couple of hours at the most. Neither requires more than two meters and soldering iron.

Method (a):

Step 1: Remove all tubes. This will eliminate the bleeder paths caused by the tubes when their cathodes become hot.

Step 2: Connect two diodes (1 amp. 1000 volts peak inverse) as shown in the diagram rep resenting a Type '80 rectifier socket. Observe polarity! The diode lead with the band goes to the ammeter terminal. *For the present the dashed connection directly to F is to be used.*

Step 3: Insert a milliammeter in the lead to the filament terminal of the '80 socket. Connect a voltmeter from the junction of the diodes to the chassis.

Step 4: Slowly raise the output of the variable transformer until a reading of a few milliamperes (say 10) is obtained on the milliammeter. If the current rises rapidly, then drops slowly to an early-steady value in one to three minutes, the capacitors are depositing film on their electrodes and the plating currents are discernable in the presence of bleeder paths. After the steady current is observed it is safe to increase the variable transformer again (again and again) as described in Step 1 of Method (b). If the ammeter reading does not initially fall rapidly and is nearly steady over several minutes, the reading represents a bleeder path and a small, unobservable parallel depositing current or a shorted capacitor. There is no way to monitor the electrolytic deposition under these conditions. Try the Method (b) procedure.

Method (b):

Step 1: Remove the connection between the bottom side of the ammeter and the filament terminal of the '80 socket and disconnect the + terminal of the capacitor under test from the rest of the circuit. Reconnect the wire attached to the lower side of the ammeter directly to the unattached end of the capacitor. Now increase the setting of the variable transformer from 0 up to a value which will cause a measurable current (say 10 milliampere) to the capacitor. If the capacitor is restorable, the current will decrease in a couple of minutes to about one tenth of its original value. If it takes longer, there is no danger unless the observed current begins to increase. Increase the variable transformer setting again so that the current is again about 10 milliampere.* Again a restorable capacitor will cause the depositing current to drop to about one-tenth of its value. Continue the increases until the voltmeter reading is at the *working voltage* of the capacitor.

Step 2: After the capacitor current has remained about 0.5 milliampere for 10 to 20 minutes,

Filter Condensers

continued from page ??

raise the potential difference of the capacitor (in steps if you wish to be really cautious) to 30-40% above the working voltage—the surge voltage. Again the current will rise and begin to fall immediately. After a few minutes, the current will again fall to about 0.5 milliampere. Watch for signs of rising current. If none occur after about 15 minutes, reduce the potential difference to the working voltage. The capacitor current should now be no more than 0.1 milliampere if the restoration has been successful. Carefully unclip the connection to the capacitor and short the capacitor to ground. A fat spark should occur which reinforces your confidence that the procedure has succeeded.

Additional comments: if you try Method (b) on a fresh capacitor, the current drop will occur in a few seconds rather than a few minutes to a value less than 0.1 milliampere. Restoration of an old capacitor in an hour or less reduces the time your variable transformer is tied up by a factor 450. While a little more sophistication is required for this restoration process in comparison to Mr. Creque's method, most radio collectors should be able to use a millimeter without serious difficulty. It will occur to anyone with a variable DC power supply that Method (b) might as well be carried out with it and a series ammeter directly on the isolated capacitor. ■

**Be aware that this procedure succeeds only if the capacitor current becomes less as time passes. If at any time the current begins to rise, the capacitor will become hot and complete the destruction of the capacitor. Reduce the potential difference and try waiting longer at the lower potential difference. Continuation of symptoms like this indicates that the capacitor cannot be restored.*

AR-1300/AA-1400

The first broadcast receiver combination manufactured by General Electric Co. capable of driving a loudspeaker. June 1922.

By: Robert Lozier, Monroe, NC • October 1992

Background information:

The General Electric Company has been involved with wireless/radio work since 1903, the first project being a one kilowatt 10,000 Hz alternator for R. W. Fessenden. However, the company management was very hesitant about getting into the business of manufacturing radios for broadcast reception.

In February 1922, a GE executive, E. P. Edwards told the Broadcast Conference in Washington, DC:

"This wave of enthusiasm for general broadcasting, I believe, if it is not curbed legally, will die a somewhat natural death. Perhaps not on the part of the small boy, but on the part of some of those aspirants who want to broadcast everything there is, because I think very few of them realize what it is. My company is beginning to study this situation, and we are not anxious to go into it on a wholesale scale."

There were many articles written in the popular and academic press of the early 1920's debating the possible future of radio broadcasting. Therefore the reservations expressed by Mr. Edwards at the 1922 conference were not so unusual.

This speech was given right at the time of the first radio "boom". Radio manufacturing companies were being formed by the hundreds. It seemed that the public would buy anything they could get their hands on . . . . Also, by this time, GE had entered into an agreement with the Radio Corporation of America and Westinghouse to market equipment on a percentage basis, 60% of RCA sales to GE and 40% of RCA sales to Westinghouse.

The Westinghouse-built Aeriola Jr., Sr. and RA-DA's were already being produced in the thousands; so there quickly developed a strong pressure on GE management to introduce broadcast receivers as a means of increasing sales through RCA.

Origins of the Radiola V:

The company produced several "SE" series receivers for the Navy during WW-1 and also built a line of equipment for commercial shipping interest prior to the manufacture of broadcast receivers . . . . This more than anything contributed to the "battleship" construction/"cost no object" techniques that appear in this first series of receivers.

Only a very large company with a largely paid-for manufacturing capability already in place could have built a radio with these

(Continued on Page 38)

Transistor Topics

By Ross Smith

The First RCA Transistor Set, Model 7BT-9J

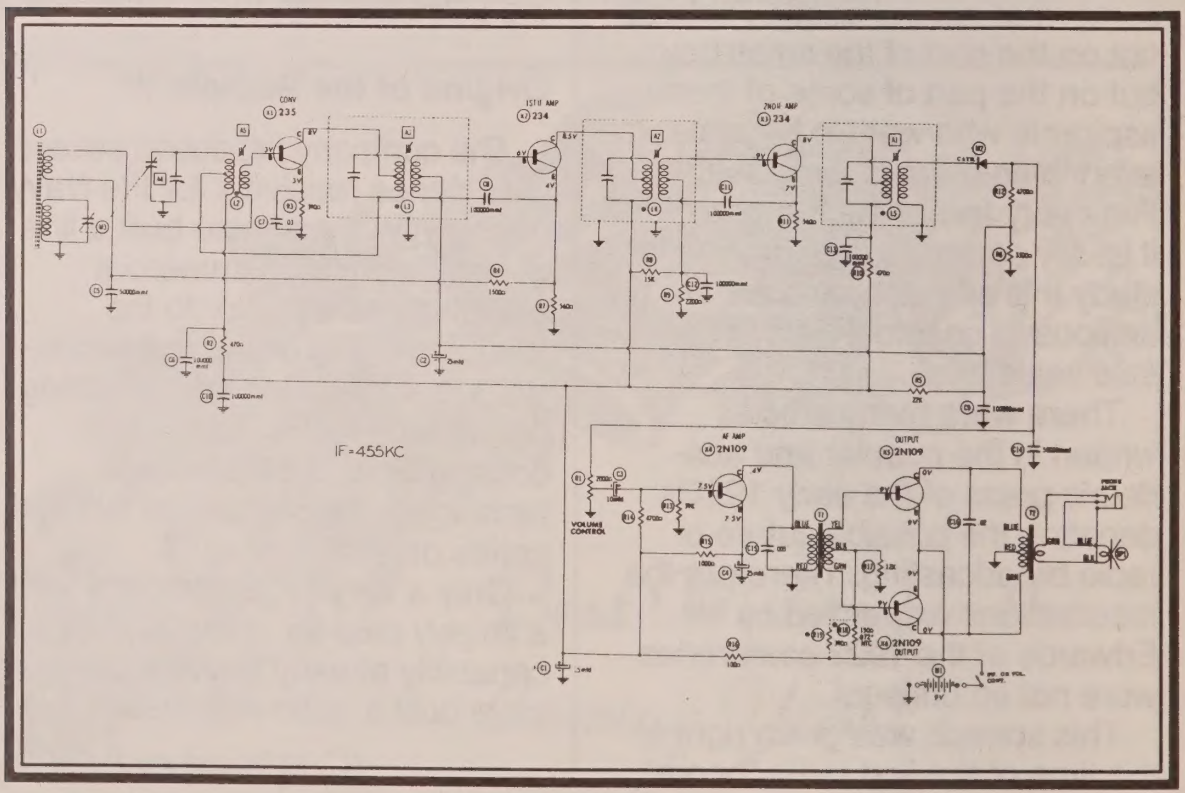
The first RCA set, released in 1955 by RCA Victor & "Victrola" Division, Radio Corporation of America, Camden, NJ, is a small six-transistor coat pocket size measuring 5-13/16" x 3-7/16" x 1-9/16" with Chassis number RC-1159. The case is two-tone aluminum and gray made of non-breakable "Impac" plastic. Transistors are mounted on sockets provided on the printed circuit board. Type 235 is used for the converter, type 234 for both IF stages and 2N109's are used for the AF driver and two push-pull outputs. The IF frequency is 455 KHz and the tuning capacitor is an open air two-gang, typical for the early US made sets.

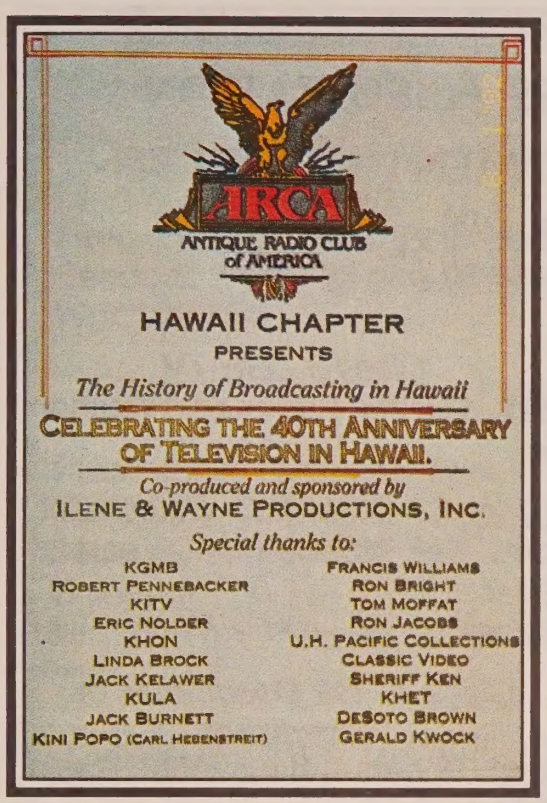
The set is powered by a "round" 9 volt battery, RCA VS-300 or Eveready 226, providing 75 hours of service at 6.6 Ma. The 100 milliwatt class "B" output circuit drives a 2-3/4" P.M. speaker. There are two audio transformers mounted on the printed circuit board.

Apparently, there were design problems with this set, as the RCA Service Manual lists six circuit changes that were made during first production in order to provide greater stability, to minimize audio regeneration and to allow inter-changeability of converter circuit transistors.

Picture courtesy of Eric Wrobbel, Woodland Hills, CA. Service Manual courtesy of Bill Morris, Carmel, IN. ■

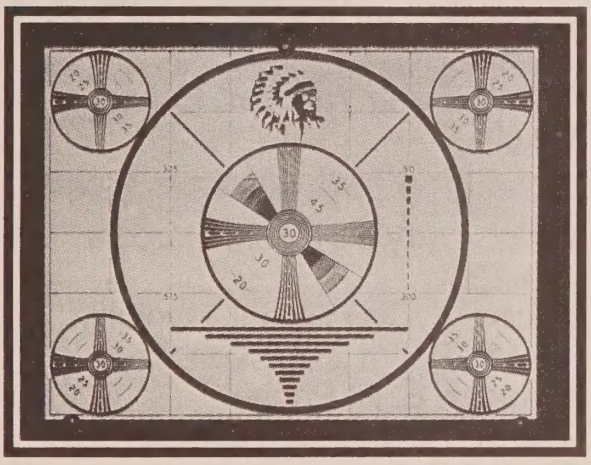
(See photo on page 15)



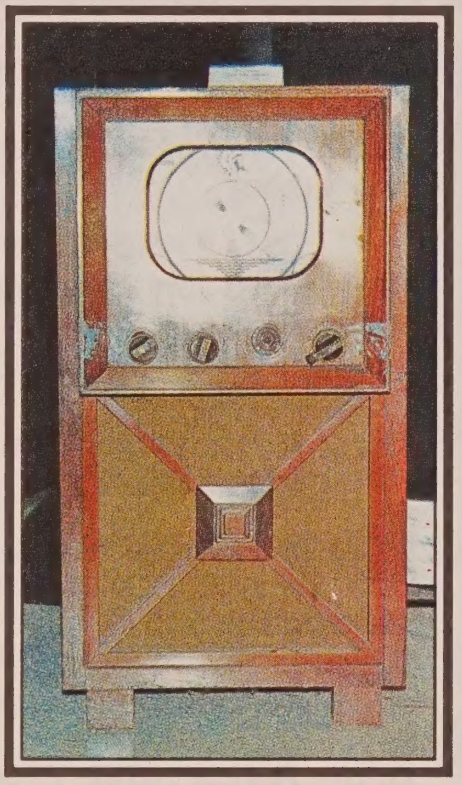


ARCA (Hawaii Chapter) Celebrates 40th Anniversary of Television in Hawaii.

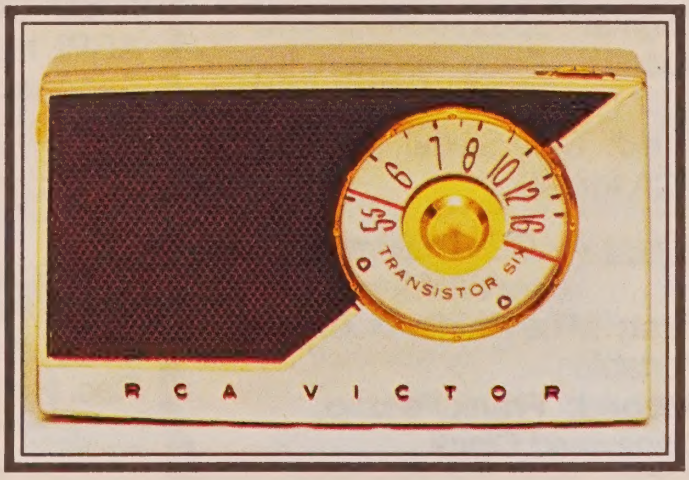
The beautiful entry placard created by Marilyn Walsh (who also created last year's placard).



The first, most watched, and only early Hawaiian TV program.



Close-up view of the television playing the simulated test pattern.



Transistor Topics 150B RCA 7-BT-9J. See story page 14.

Antique Wireless Association Old-Timers Equipment Contest

Rochester, NY

Submitted by: Ludwell Sibley

Class 1 - GE Commercial Equipment

First: Peter DeAngelo, DC Watt-Hour Meter
Second: Orval Parker, Instrument Display
Third: Tim Walker, "A Tale of Two Meters"

Class 2 - GE Tubes

First: Floyd Jury, Development of Metal Tubes
Second: John Parsons, GE Tubes and Sockets
Third: Herbert Waterman, Thyratron to SCR

Class 3A - GE Receivers, 1920s

First: Lauren Peckham, Hull Kenopliotron Set
Second: Robert Murray/Robert MacIntyre, Canadian Broadcast Sets
Third: Robert Lozier, Origins of the Radiola V

Class 3B - GE Home Receivers, 1930s

First: Ross Smith, Model A53, Original Tubes
Second: Doug Houston, Model A-82 (1936)
Third: Clay Seidel, Model M40, RCA for GE

Class 4 - GE Receivers, Post - WW II

First: Mike Raide, Model 140 Portable
Second: Frank Feczko, Disneyland Clock

Class 5 - GE TV

First: George Freeman, Weather Girl

Class 6 - GE Military Equipment

First: Ken Blakeman, 40 Years of Radar
Second: Will Jensby, Wavemeter

Class 7 - GE Documents or Advertising

First: Robert Schaumleffel, Radio Stations
Second: Tim Walker, Tube Spec Sheets
Third: Peter Yanczer, Paperweight

Class 8 - Passive Receivers

First: Larry Babcock, Marconi CM-294C
Second: Clay Seidel, Radiola I
Third: Bengt Svensson, The Listener, E. R. Phone
Third: Ross Smith, Long-Wave Crystal Set

Class 9 - One- & Two-Tube Receivers

First: Gordon Symonds, 1926 ARRL Homebuilt
Second: Bob Dennison, Camper's Companion
Third: Billy Richardson, Cockaday Four-Circuit

Class 10 - Three-Tube Receivers

First: Ron Frisbie, Melodyne
Second: Billy Richardson, Detroit Rec. Horn

(Continued on Page 17)

(Continued from Page 16)

Class 11 - Four- & Five-Tube Receivers
First: Ernie Hite, Premier Electric
Second: Peter Yanczer, Wurlitzer M-4

Class 12 - Six- or More Tube Receivers
First: Lloyd Swackhammer, Stromberg Chairside
Second: Billy Richardson, Victoreen
Third: Frank Feczko, GE Model 202

Class 13 - Tube Transmitters
First: Bob Mattson, Utah Junior
Second: Mike Raide, Gates Exciter
Third: John Rollins, Push-Pull Oscillator

Elle Award: Gordon Symonds, 1926 ARRL Receiver

Eunice Thompson Award: (Best of Show): George Freeman, Weather Girl, Marilyn Arms

Matlack Transmitter Award: Mike Raide, Gates Exciter
Display Award (For Best Presentation): Robert Murray and Robert MacIntyre

Judges: Floyd Bennett, Geoff Bourne, Alan Douglas, Orval Parker, Ross Smith, Ralph Williams

Apprentice Judge: Gordon Symonds

Administration: Ralph and Elinor Williams ■

1st ANNUAL Rx FOR

(Radio) Spring Fever

March 27, 1993
Washington, PA Fairgrounds

- At the crossroads of the nation - I79 - I70
- Unlimited parking
- Hook-up for 60 RV's
- Indoor drive-in flea market
- Large Auction
- All motels and hotels
- Fabulous Trolley Museum
- Check in at 7:00 a.m.
- Lunch on the grounds
- Auction at 1:00 p.m.

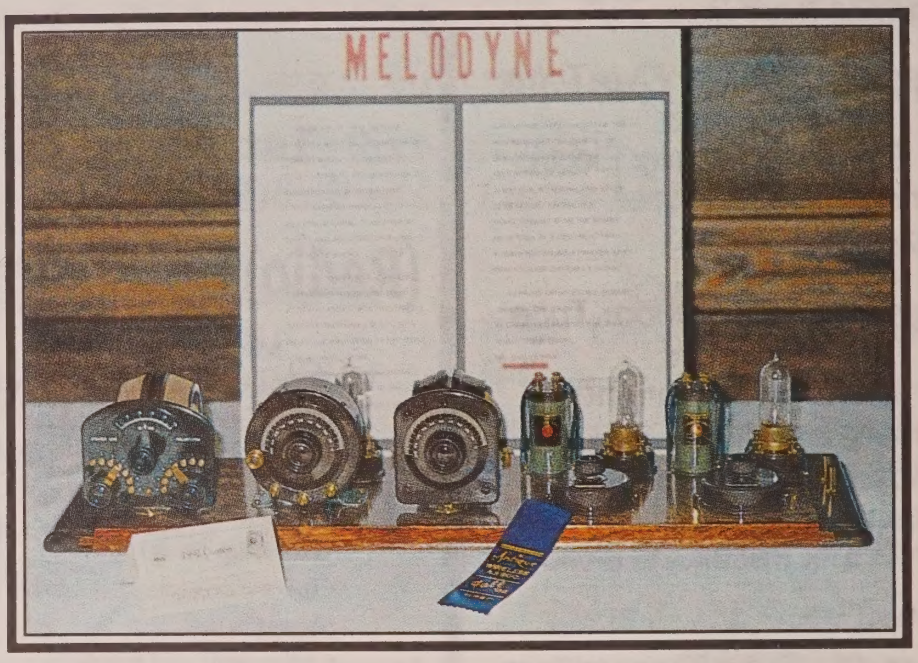
West Virginia
ARCA
ANTIQUE RADIO CLUB of AMERICA
Chapter

Sponsored By:

Pittsburg Antique Radio Society
W. Va Chapter-
Antique Radio Club of America
Mid-Atlantic Antique Radio Club
Museum of Radio & Technology, Inc.

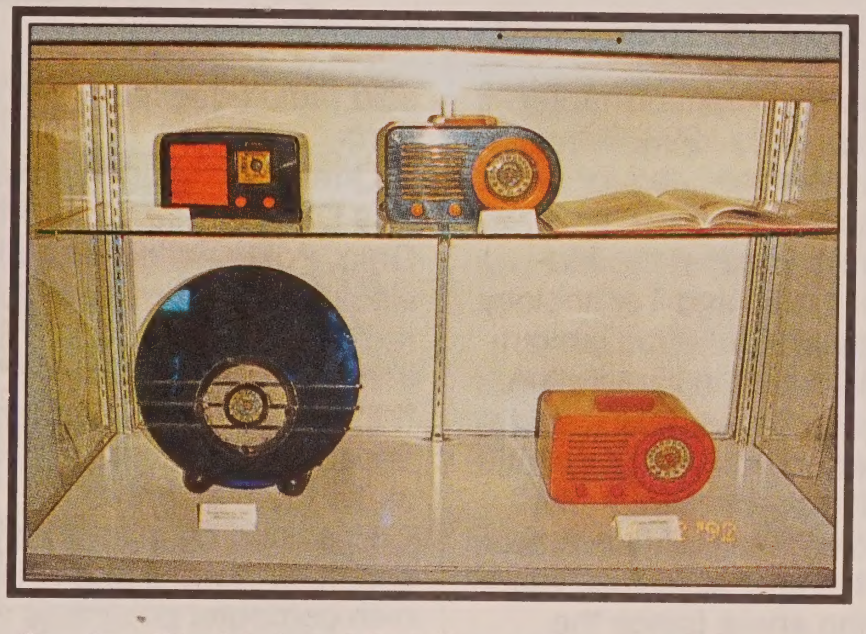
FOR DETAILED INFORMATION WRITE TO:

SPRING FEVER
300 Washington Trails
Washington, PA 15301



Melodyne display, see story page 7.

Jim Conrad (Grandnephew of Dr. Frank Conrad) keynote speaker at the National Convention of ARCA this past June.



Sparton Bluebird and Catalins on top shelf (J. Baldwin Collection). Butterscotch Fada 1000, Marcus Child Collection.

ARCA Hawaii Convention

Radiola Grand from the J. Baldwin Collection. Documented to be a gift from David Sarnoff to Henry Ford.

News From West Virginia

By Zane W. Parsons, N8OLD, Reporter

The West Virginia Chapter welcomes all to 1993. Big Doings are scheduled for us all. On Saturday, April 10th, we will host a mini-meet at the Museum of Radio and Technology. Also, the ARCA 1993 Convention will be held in Huntington, West Virginia. We look forward to seeing many of you at this event.

The voting precinct formerly using the museum building, has come back home. After four years of wandering about (since the school closed), looking for temporary polling places, the voters are now using the museum auditorium as their voting place.

The following story was printed in the *Huntington Herald Dispatch* on the day following our last mini-meet.

Organizers Hold Auction, Plan Improvements

By JONATHAN PRICE
The Herald-Dispatch
Sunday, Oct. 25, 1992

Waves of nostalgia filled the air Saturday, emanating from the Museum of Radio and Technology in Huntington during an open house and auction.

Located in the old Harveytown School on Florence Avenue, the museum holds a collection of antique radios, broadcasting equipment, televisions and pre-computer office equipment.

A small flea market was set up outside the building where vendors sold radio equipment and spare parts.

One of the youngest customers was Daniel Post, 13, of Athens, Ohio. Post said he likes all sorts of electronic equipment including radios and computers. "I like things that are electronic," he said. "I think I like old computers because sometimes they don't make them anymore."

Post said he enjoys playing computer games and writing his own computer programs as well as building electronic projects from kits.

Richard Post, Daniel's father, said his son was carrying on his own love of gadgets. Born in a small town in the Netherlands, the elder Post said he first became infatuated with electronics by watching a local radio and automobile repairman in his country of origin.

"He gave me an old electric fence battery, a light bulb and a kitchen knife and showed me how to make a circuit. That was something to a 6-year-old kid," said Post, who came to the United States with his parents when he was 8.

Emory Deutsch, 67, of Columbia, S.C., said he came all the way to Huntington for the event. A retired electrical engineer, Deutsch has 160 antique radios in his collection. When asked about the allure of the antiques, he replied, "Electronics started here.

(Continued on Page 21)

News From West Virginia

(Continued from Page 21)

These people are dedicated to preserving it."

Zane Parsons, a member of the museum's board of directors, said the auction would include several vintage radios. Members of the museum could sell free at the auction, and non-members had to pay a 10 percent commission that goes to the museum. Parsons said several items had been donated, the proceeds from which would also go to the museum.

The museum had several exhibits, including a re-creation of a radio supply store circa 1920-1930. The store holds a number of treasures including a small wind-powered generator and a transmitter of the type first used to broadcast across the Atlantic.

James A. Duffield Jr., a charter member of the museum, said the transmitters are illegal to use these days because signals they broadcast are not confined to any particular frequency. The transmitters also are dangerous, as they spark and crack and produce about 5,000 volts of power. "It would give you quite a jolt," Duffield said.

Other exhibits include a demonstration room set up as a replica of an old electronics classroom, a research library and a replica of an old broadcasting studio. Duffield said there are plans to set up an actual station there to broadcast educational and historical programming, using as much of the vintage equipment as possible.

Parsons said the museum was started by several members of the West Virginia Chapter of the Antique Radio Club of America, though it operates separately.

The Museum of Radio and Technology is open from 10 a.m. to 4 p.m. Fridays and Saturdays and from 1 to 4 p.m. Sundays.

We wish to express our thanks to Kelly Bragg, Topics Editor, Reporter Jonathan Price, and Photographer Michele Katz.

Well, I guess that is about all for now. Keep warm this winter, and come see us. ■

Chapter News

Ask about a chapter in your area.

*Contacts

Antique Radio Club of America
West Virginia Chapter
408 8th Avenue
St. Albans, WV 25177
*Geoff Bourne
(304) 722-4690

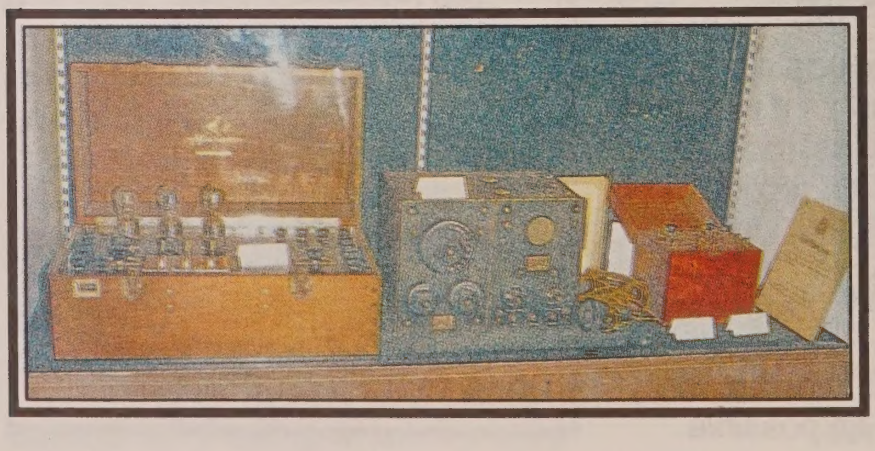
Hudson Valley Antique Radio & Phonograph Society-ARCA
Rt. 207, P. O. Box 1
Campbell Hall, NY 10916
*Linda or John Gramm
(914) 427-2602

Hawaii Chapter ARCA
95-2044 Waikalani Place C-401
Mililani, Hawaii 96789
*Leonard Chung

Kentucky Chapter-ARCA
1907 Lynn Lea Road
Louisville, KY 40216
*Robert Dickerson
(502) 447-6399

Fifties deli case restored by ARCA Hawaii to display transistor radios. Proved more popular than the Catalins.

Radios (above and right) from the Chung and Marcus Child collections.



1922 Magnavox Amplifier, Westinghouse RA & DA, (J. Baldwin Collection), Homebrew crystal radio set (Mrs. McNeil)

Top: GE display, AWA Convention, Rochester, NY.

Right: Close-up of the "Koa" crystal set. The galena and whisker are intact.

Bruce Kelly (r) and Mel Comer (l) view "Melodyne" at the '92 Antique Wireless Association (Fall) Contest.

The Sink Circuit

By Jim Troe

In the twenties, starting with the advent of radio broadcasting, there was a great struggle among experimenters, engineers, and inventors to develop the best new radio circuit, one that would hear further, talk louder, be cheaper, make use of a new line of manufacturer's components, or just look or sound catchy to the reader. It is interesting to look through the magazines of the time and read month after month about the new circuits. Some are clever. Some advanced the art. Many were the same old circuit redrawn to look different. Many were introduced by the employees of component companies in an attempt to sell their new parts. One circuit I recently came across, while looking thru the radio section of a 1924 issue of the Chicago Herald Examiner, was certainly a new one on me. It was called the "Sink Circuit".

The design is credited to E. J. Ther, a radio engineer at The Radio Products Co. Having experimented with it for many months, with outstanding results, he decided to make it public, even though it sounded like a rather weird idea. He claimed to be able to listen to many East coast stations, with good loudspeaker volume, in the midst of the powerful Chicago stations. The author of the article in the Herald Examiner says that he had witnessed the operation of the set, and was astounded at the performance.

The circuit is shown in Figure 1. It uses a stage of radio frequency amplification and a non-regenerative detector. The tuning consists of a coupled circuit tuner, a variometer, and a 23 plate condenser. To tune the set the signals are first brought in roughly using the coupled circuit tuner, and then cleared up by using the variometer and the variable condenser.

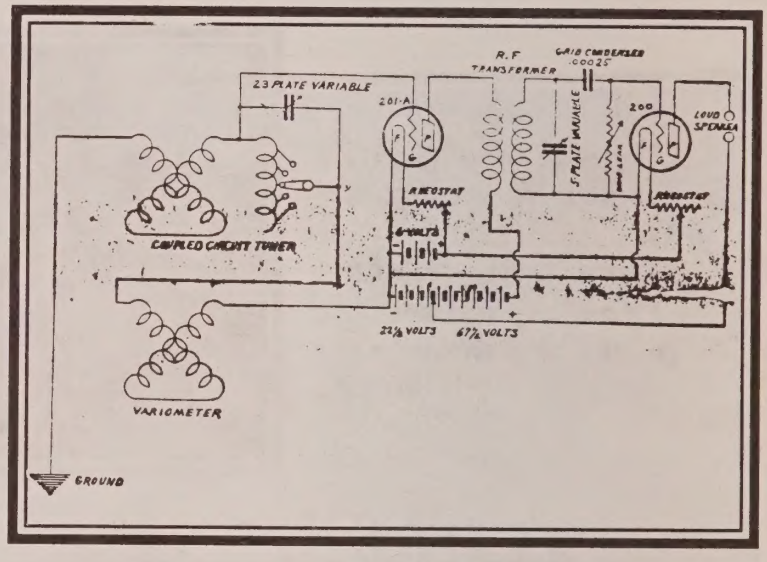


Figure 1: The Sink Circuit

It was reported that the filament adjustment of each tube was very critical, it being possible to cut out one station and hear another by very slight adjustment of the filament rheostats. The first stage tube was a 201A and the detector was a 200. The article states that it is important to select an inter-

THE SINK CIRCUIT

(Continued from page 24)

stage radio frequency transformer that is designed for the "new radio channel assignments". The use of the small 5 plate variable condenser shown across the secondary of the radio frequency transformer was not stated.

The component values are shown on the schematic, except for:

201A rheostat, 25 ohms
200 rheostat, 6.5 ohms
Grid leak, 1.5 Megohms

One final bit of advice to the experimenter was, "when connecting the ground lead to the pipe in the sink, be sure to scrape the pipe until it is bright so as to insure a good connection."

By coincidence, while looking at The Wireless Age magazine for March, 1922, I came across an article titled, "A Radio Receiving Circuit Without Aerial", by L. Sutherlin. This circuit is shown in Figure 2. It is a "detector and one step". The author states that the component values are those that would be used in any similar set, the only novelty being the "ground aerial". He claimed to hear stations in the Midwest clearly from Washington, DC.

So, Ther wasn't first, but he was smart. He adopted the concept to use of Radio Products Company components. His employer must have been happy.

Although not stated in either article, the circuits probably appealed to listeners who were forbidden to install outside aerials. some of the amateur radio operators today who are limited by property regulations from the use of outside antennas should take note of the solution of the twenties, and try the Sink Circuit! ■

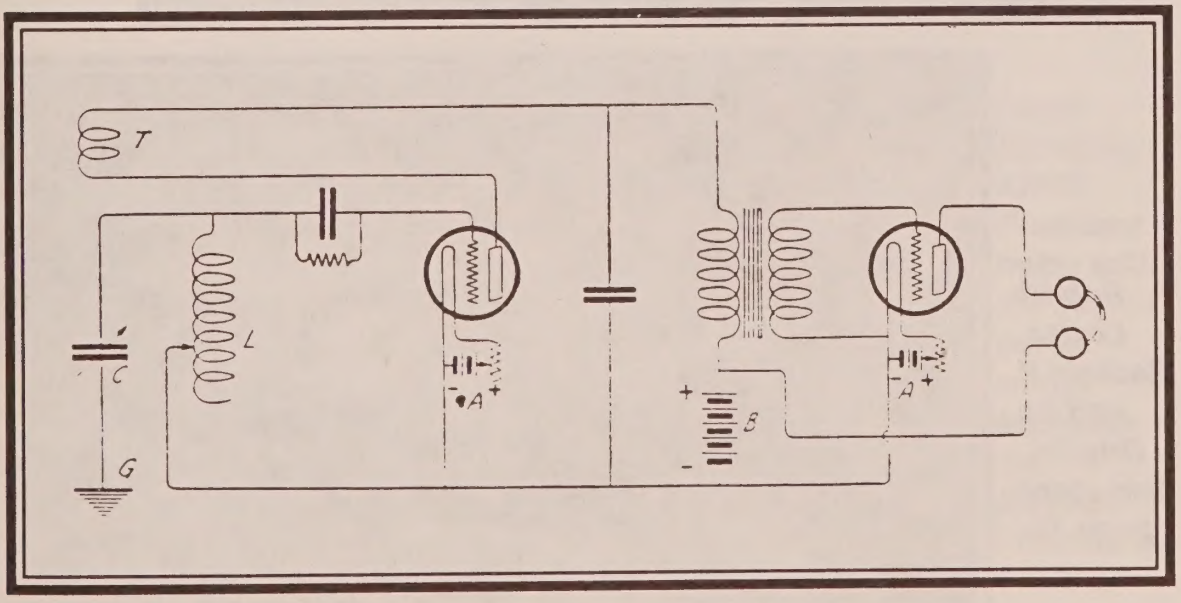


Figure 2: A No Aerial Circuit

Ernie Hite, Premier Electric Company. See story page 8.

Robert Lozier, Radiola V and Its Origins. See story page 13.

Ron Frisbie (left) and Mel Comer. See story page 7.

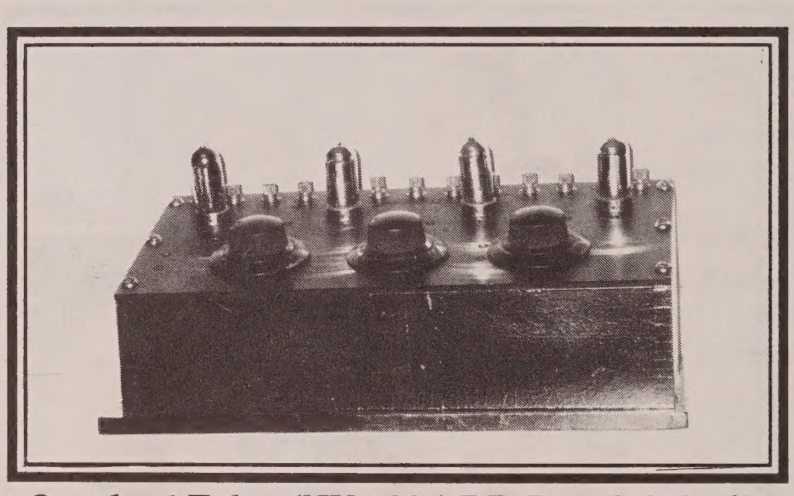
Don Patterson, editor of Radio Age and James Troe, ARCA past-president at AWA '92, Rochester, NY.

Lloyd McIntyre, ARCA President helps with the sale of books which supports the Museum of Radio & Technology.

Two Strange Ozarka Sets

By George Hausske

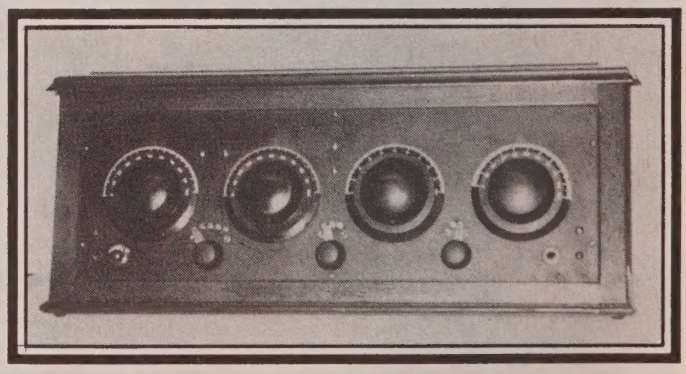
I have two sets that appear to be Ozarka factory sets, but they do not quite match set information available to me. One uses four exposed UV-199 tubes, as shown in the illustration. The other is a five tube, four dialer, that is also shown.



Ozarka 4 Tuber (UV-199s) RF, Det. & 2 Audio

The four tube version is physically close to the Ozarka Jr. (Model No. 299) shown in Allen Douglas' book, except that mine does not have a built in speaker. No make or model number appears on the set. The three dials are a surprise when one looks inside. The one on the far right, with 180 degrees calibration, controls a 270 degree rheostat, which is also the on-off control. The set consists of a radio frequency amplifier stage, a detector, and two stages of audio. The rf stage has a tuned plate circuit coil that is coupled to the detector stage through the 0.00025 mfd grid condenser. The grid leak, being below the panel, requires removal of six screws to get at it for adjustment. The set has 13 binding posts, a relatively large number for a four tube set.

The four dialer is similar to one shown in Douglas' book except there it is identified as a 4-tube set, whereas mine is a five-tube set. McMahon's guide also lists a four-dial four-tube set. My set uses five 201As, consisting of an rf stage, a detector, and three stages of audio. The third audio stage can be bypassed if not needed, but the tube remains lit. There are tap switches to vary coupling to the antenna and to the detector coil, possibly to control selectivity. In this set, the rf stage has a tuned plated coil that is direct coupled to the detector through the grid leak, placing



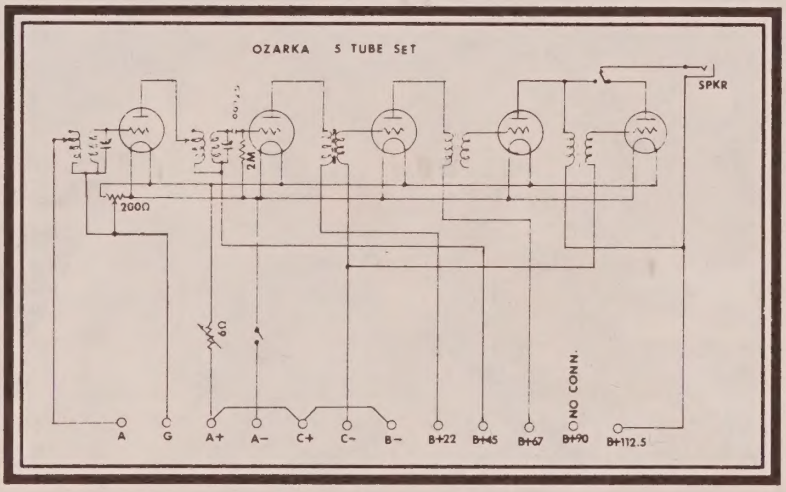
Ozarka 4 Dial 5 Tuber - RF, Det., & Audio

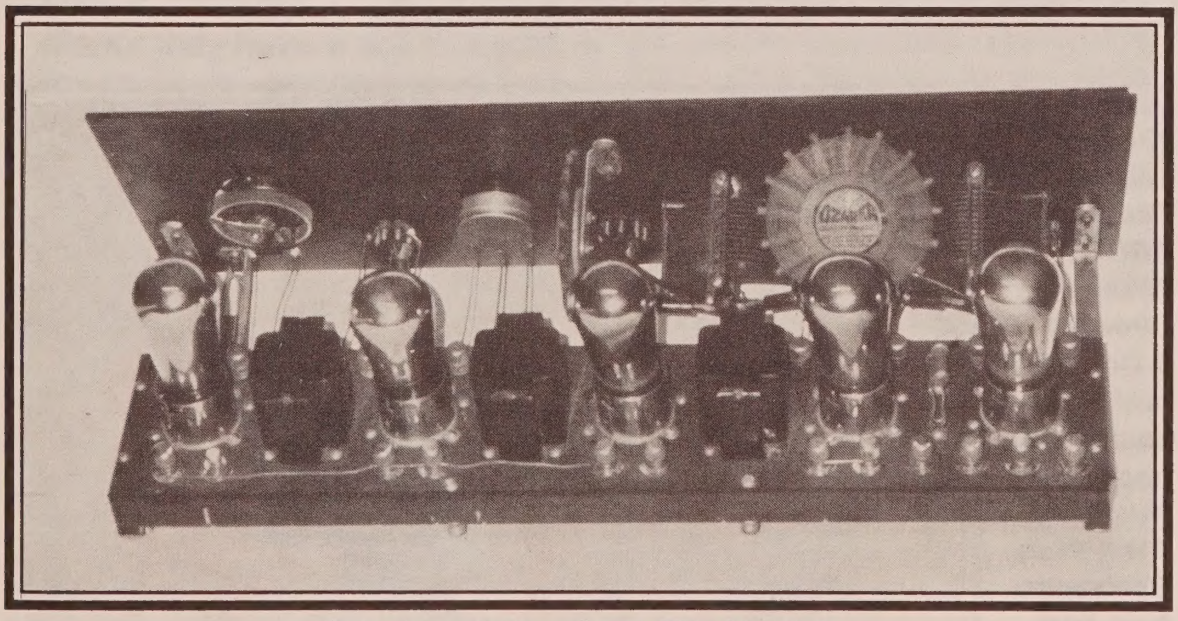
undesirable B+ on the detector tuning condenser. This seems to increase the interaction between controls to a greater degree than the more usual inductive coupling. There are no bypass condensers in either set. In the case of the five tube set, it howls badly if you do not use a very low impedance power supply. All of the front panel controls are connected to binding posts on the chassis, making it easy to change the front panel controls. The four dials are misleading. Only two are used for tuning. One of the other two is used as an "RF Oscillation Control", and the other is the filament rheostat control.

Both sets work well in the Chicago area. Ozarka may have skimped on parts count, but the quality of the parts is high. Both cabinets are of average quality. The four tube cabinet is just a cut above homemade quality. Although they were made in Chicago, I have seen relatively few Ozarka sets, and none like the two here described.

Only brass base 199s fit the sockets, and on the four tube set they have to be inserted with force. Does this mean that over the years, the bakelite base 199s we now have, have expanded in diameter?

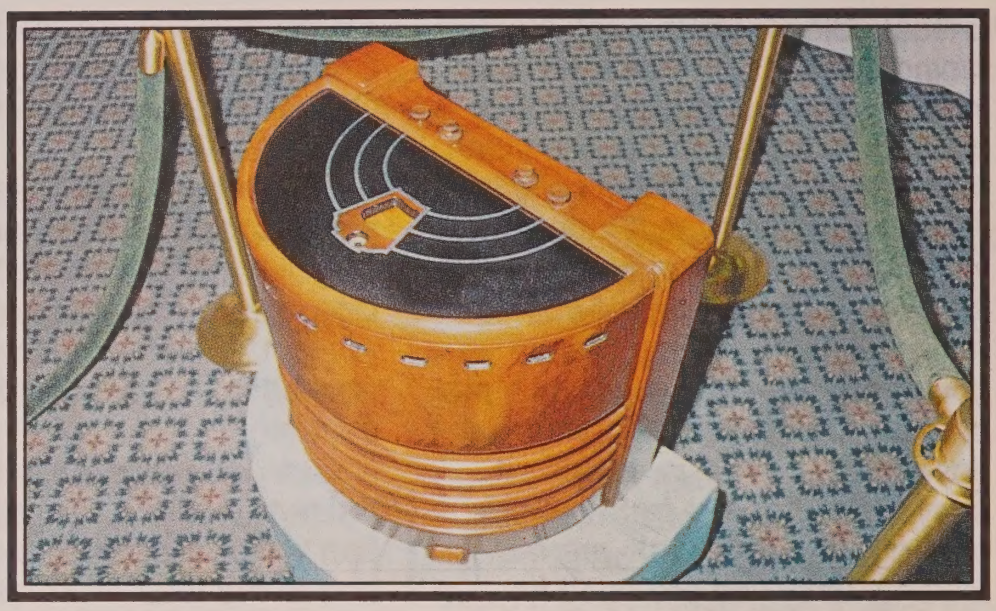
Can any reader help me identify these two sets? If so, the information will be published by ARCA, to add to the total information available on sets manufactured by Ozarka. ■





Interior of Ozarka 4-Dial 5-Tuber

Contest Winner



Ludwell Sibley editor of the AWA Old Timers Bulletin and Rodney Schrock, AWA '92.

James Kreuzer, Lauren Peckham, ARCA & AWA Director, & Company exchange some radio trade secrets at AWA '92 in Rochester, New York

NATIONAL WIRELESS MUSEUM

OF THE WIRELESS PRESERVATION SOCIETY
ISLE OF WIGHT, ENGLAND

CHAPTER 2

By Jim Troe

In the Spring 1991 issue of the Gazette, I reported on the above radio museum and said that I hoped to visit it some day. On a recent business trip to England I did visit the museum. I was rather disappointed. The description of the museum and the collection, as recorded in my earlier article, are generally true, but overstated. The museum is part of a larger complex assembled by the owner of a manor house, in an attempt to bring in visitors, to help pay the taxes. This is not uncommon in Great Britain. Many of the old castles and manor houses have been kept in the family only by opening them to the public. To draw attendance, many have added "museums", balloon shows, carnivals, etc. At Arreton Manor they have a doll museum, a toy museum, a collection of farm and kitchen items from the past, a collection of clothes, the usual tour of the manor house, and the wireless museum. The latter is only one room, possibly 500 square feet or so, with a collection of radio sets. There was little pre WWII. Most of the material was from the 30s to 60s. It is maintained by a dedicated group of local collectors, who appear to have taken advantage of the space offered, and done the best they can in the space available.

I would not advise anyone to go out of their way to visit this museum. The ferry ride from the mainland is both expensive and slow. However, if one was going to be on the Island for other reasons, a visit to this Wireless Museum would be worthwhile. The curator of the museum is Douglas Bryne, G3KPO, 34 Pellhurst Road, Ryde, Isle of Wight, PO33 3BW, England. ■

EXHIBITING AT THE OLD EQUIPMENT CONTESTS

By Jim Troe

For many years, a popular activity at the national AWA and ARCA meets has been the Old Equipment Contest. The concept has steadily grown in popularity. At almost any meet held by an antique Radio Club, this event is included on the program. The standard way these events operate is to have contest categories established before the meeting. Entries are judged in each category and ribbons are awarded. A "Best In Show" award is typically given More recently, ARCA introduced the concept of having the spectators vote on "The People's Choice Award".

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Old Equipment Contests

(Continued from page 31)

This idea has been picked up on by many other clubs. Many of these contests turn into major museum quality events, with vary rare and one of a kind entries showing up. It is often the only time that the general member or guest has a chance to actually see the rarities of radio history.

Judging of these events is usually done in accordance with published rules of the club. It is typically based on rarity, quality of the set, degree and quality of restoration, documentation, and presentation. The quality of the documentation and the quality of the presentation has evolved the most over the years. Major winners often go to great pains to accumulate documentation that is made part of the equipment display, and have built eye catching displays. A competitor in a major contest today has to think carefully about presentation.

Bob Lozier is an example of an excellent radio historian. He often submits winning entries at contests. He has prepared a detailed article that he calls, *"A Primer on How to Prepare Old Radio Equipment for Exhibition."* This was published in the September 1989 issue of the *Mid Atlantic Antique Radio Club (MAARC) Newsletter.* This should be read by anyone contemplating preparation of a significant entry at a contest. Copies of the article can be obtained by sending me a self addressed and stamped large envelope (111 Skyline Drive, Morristown, New Jersey 07960).

There is a negative aspect that appears to have evolved as a result of the move to greater and greater quality displays at these events. It has become increasingly easy for a person to develop a feeling that it isn't worth it. "The professionals will win again. I won't, so why take anything". This is not good for the overall value of the event to the members, because it cuts down on the number of displays. It is important that the rest of us keep putting items in the contest, even if we think that we will not win anything, in order to maximize the historic value of the event, and increase visitor interest due to the breadth of material shown. I admit that I have fallen into the category described but I think that I am going to again enter material, even though I do not have time to develop a winning entry, at least until the day comes that I have the time. Then you will see! ■

Member Letter

Gee Mel, ARCA is really great. I love it to death! Thanks for submitting my ad for publication.

Once again, thanks.

Carl Herman Creque III
87-91 Escudero Street
Culebra, Puerto Rico 00775

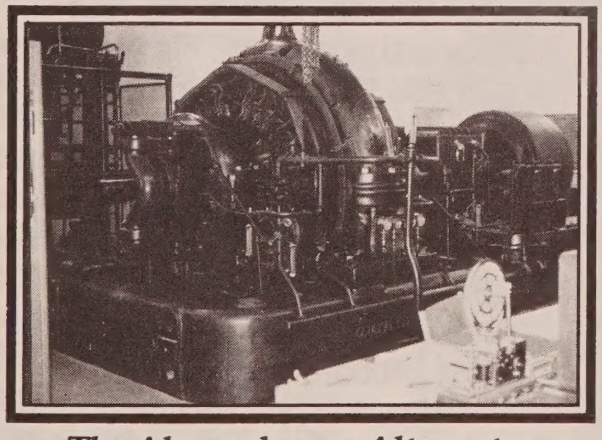
History Revisited
The Alexanderson Alternator Still Lives

By Jim Troe

The many contributions of E.F.W. Alexanderson to the early history and commercialization of radio have been well documented. He seems to be best known as the father of the Alexanderson concept to generate continuous wave radio frequency energy using a rotating mechanical generator. He must be given credit for bringing the concept to commercial realization. Along the way he made many inventions that led to its success.

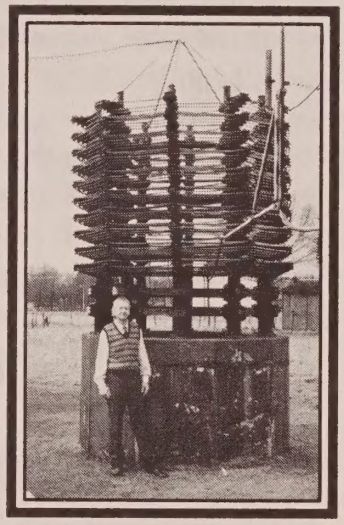
I was preparing a history of Alexanderson and his Alternator work for submission to the ARCA Gazette. Before completing it, I found out that a group on Long Island was doing somewhat the same thing. Their work resulted in the fine series of articles recently published in the *Gazette* (Volume 20, issues No. 1 and 2).

Therefore, this article takes up where they left off, and reports on the only remaining large Alexanderson Alternator that exists. It is still in operational condition.



The Alexanderson Alternator
(from left: Alternator, Gear Box, Drive Motor)

During 1920 and 1922 General Electric built twenty 200 KW (output into the antenna) Alternators. They operated from 10,500 to 25,000 meters (28.6 to 12.0 kHz). They were installed at several locations in the U. S. and Hawaii, and in several other countries, to provide high speed telegraph communication with Radio Central on Long Island, and elsewhere. Installations were made in Wales, Poland and Sweden. At each location, two Alternators were installed. Most of the stations were operated through WWII. Equipment was scrapped in the 1960s. Only one alternator still exists and that is the one in Sweden.



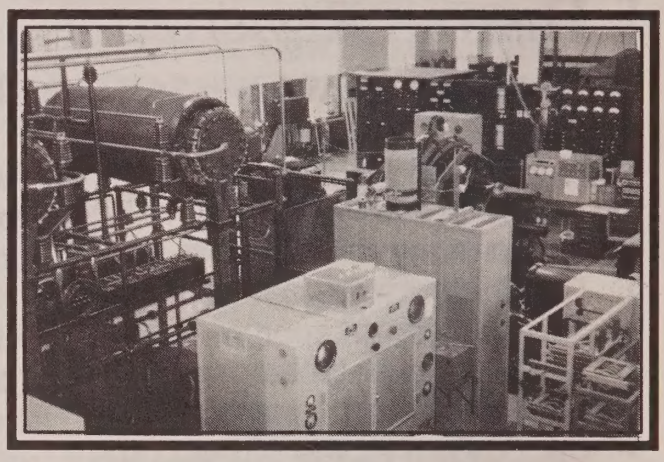
Antenna Loading Coil
(Bengt Dagaes)

During some of my recent work with Swedish Telecom I was introduced in Sweden to Bengt Dagaes, who is the manager in charge of the Alexanderson Alternator installation (station SAQ) at Grimeton, Sweden. He invited me to visit the installation, which I quickly accepted.

ALDERSON ALTERNATOR

(Continued from page 33)

Grimeton is about one hour South of Gothenburg, Sweden, in the South Western part of the country. The first sign of the station on the drive South is the immense antenna structure. From that point on, everything was immense! When the station was built in 1922/23, a small community was built around the station to house the operating staff, because it was then in a relatively remote part of the country. The station house itself originally housed the standard two Alternator installation. Some years ago one was junked, but one was kept, with the intent of keeping it in operating condition. Over the years other transmitters have been installed in the transmitter house, used, and turned off as new equipment took its place. Therefore, the operations building is a fascinating museum of radio transmission equipment, all sitting where it was used.



RF Transformers on left. Power control panel in right background. Alternator hidden. Cabinets in foreground are another xmtr.

Bengt Dagaes Station Manager, SAQ at the Key

Bengt was a fine host, and spent a good part of a day showing me around and discussing the history of the station. He joined the team there in 1955, so was not in on the early days of the alternator operation, but is now responsible for its upkeep and occasional operation. He was very apologetic that he could not "turn it on for me", but painters were working on the ceiling, and drop cloths had to be kept over part of the equipment.

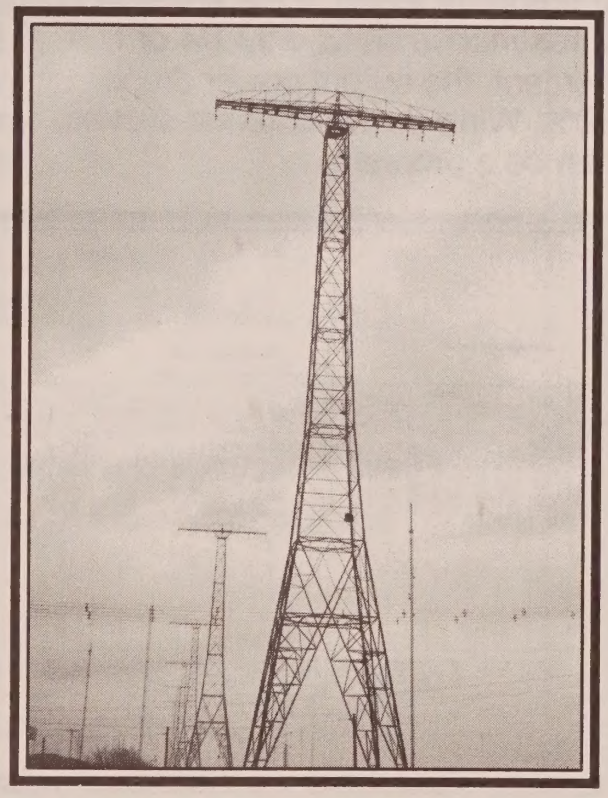
This installation was the last one made by RCA/General Electric. According to the log of the station, the first official operation date was December 12, 1924. the last official traffic was carried

ALDERSON ALTERNATOR

(Continued from page 34)

on March 16, 1948. The official opening of the station occurred on July 2, 1925 in ceremonies attended by Alexanderson (who was born in Sweden), David Sarnoff, and the King of Sweden. The station is now only turned on for special tests, demonstrations, and to assure its continued operability. A special test transmission was made on September 25, 1986, coincident with the AWA convention that year. Bengt has an interesting file from stations, primarily in Europe, who copied (or tried to copy) the transmission. Not many stations in the U. S. copied it for various reasons, one being that the short notice did not permit many persons to get receiving equipment operating on the frequency of the test. Propagation was not good to the U. S. at the time of day of the test.

The station still operates on 17.2 kHz, with 200 KW output power into the antenna. Key down input power from the AC mains is 400 KW. The Alternator rotation speed is 2115 rpm. This rotation speed has to be maintained to plus or minus 1 rpm, no load to full load. The alternator has 976 poles. The antenna system is a flat top, 6600 feet long, 375 feet high, supported on six immense towers. The antenna system has its main lobe pointed at Long Island, New York. The antenna system is still used for VLF communication and experimentation. Keying at these powers is interesting. A "magnetic modulator" is used that detunes the antenna when the key is up, causing the output power to drop to about 10% of the key-down



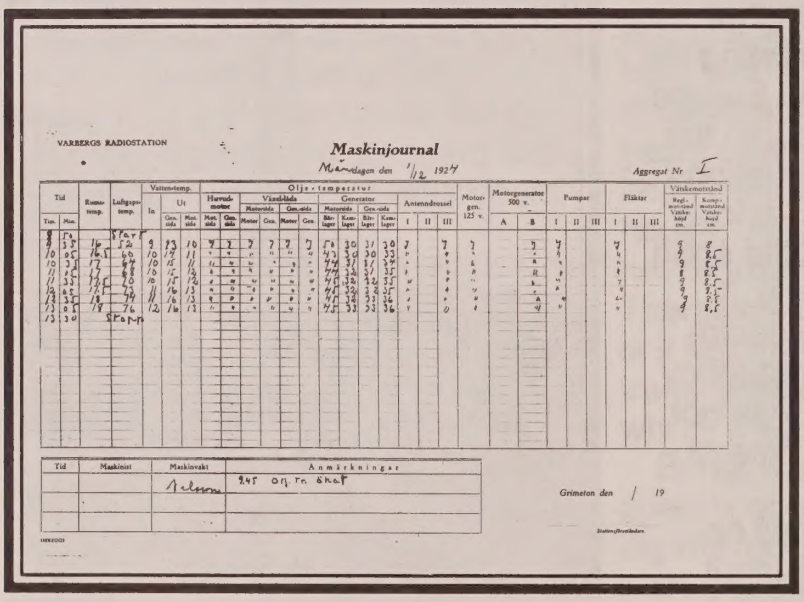
Antenna Towers Radio SAQ

Jim Troe and Bengt Dagaes Looking at Log of SAQ

ALDERSON ALTERNATOR
(Continued from page 35)

power. With this technique, keying was possible up to 500 words per minute. Keying was actually done in offices in Gothenburg. At these frequencies the antenna must be precisely tuned. If the antenna resonance shifts only 1/4 of 1 percent, the output power drops 50%. Wind on the antenna system can be a problem.

The Alexanderson Alternator was a major contribution to commercial and military radio. RCA was created to keep the Alternator under control of the U. S. and out of the control of British Marconi. Although its life was relatively short, due to vacuum tube transmitters taking over the high power transmitter role, its impact on history must not be forgotten. Although Alexanderson died May 14, 1975, at the age of 97, his contributions, witnessed by 344 patents, will live forever. ■



VARBERGS RADIOSTATION

Maskinjournal

Måndagen den 1/12 1924 — Aggregat Nr I

Tid Tim.	Min.	Rumstemp.	Luftgaps-temp.	Vatten-temp. In	Ut	Olje-temperatur Huvudmotor	Växelläda Motorsida	Växelläda Gen.sida	Generator Motorsida Kam-lager	Generator Motorsida Rör-lager	Generator Gen.sida Rör-lager	Generator Gen.sida Kam-lager	Antennrossel I	II	III	Motorgen. 125 v.	Motorgenerator 500 v. A	B	Pumpar I	II	III	Fläktar I	II	III	Vänkemottånd Regl.-motstånd Vänkebord cm.	Komp.-motstånd Vänkebord cm.
8	15		Start																							
9	35	16	12	9	13	10	7	7	7	7	7	7	26	30	30	7		7	7			7			9	8
10	05	16	10	10	13	11	"	"	"	"	"	"	42	39	30	"		"	"			"			9	8,5
10	35	17	10	10	12	11	"	"	"	"	"	"	44	37	37	"		"	"			"			9	8,5
11	25	17	11	10	12	12	"	"	"	"	"	"	44	34	37	"		"	"			"			9	8,5
11	35	17	12	10	12	12	"	"	"	"	"	"	45	38	39	"		"	"			"			9	8,5
12	35	17	12	10	12	13	"	"	"	"	"	"	45	39	38	"		"	"			"			9	8,5
13	35	18	14	10	12	13	"	"	"	"	"	"	45	34	33	"		"	"			"			9	8,5
13	05	18	16	12	14	13	"	"	"	"	"	"	45	33	36	"		"	"			"			9	8,5
13	30		Stopp																							

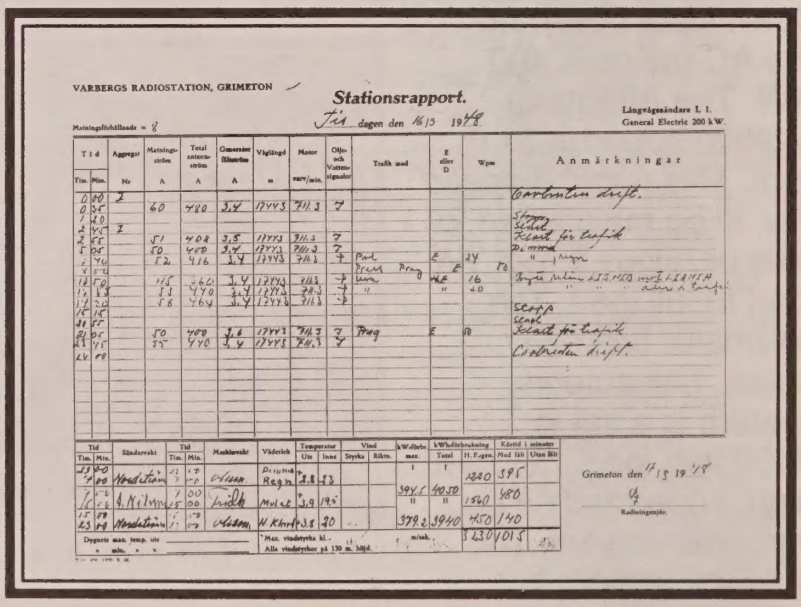
Tid	Maskinist	Maskinvakt	Anmärkningar
		Nelson	245 on rn 6hat

Grimeton den / 19

Stationsföreståndare.

← *Station log "Start" on Dec. 1, 1924*

The last page in the active station log March 16, 1948 →



VARBERGS RADIOSTATION, GRIMETON

Stationsrapport.

Matningsförhållande = 8

Jul dagen den 16/3 1948

Långvågssändare I. 1. General Electric 200 kW.

Tid Tim.	Min.	Aggregat Nr	Matnings-ström A	Total antenn-ström A	Generator Rörström A	Våglängd m	Motor varv/min.	Olje- och Vatten-signaler	Trafik med	E eller D	Watt	Anmärkningar
0	00	I	60	480	3,4	12443	311,3	7				Grimeton drift.
0	35											Stopp
1	40											Start
2	45	I										Klart för trafik
2	55		51	408	3,5	12443	311,3	7				Personal
5	05		50	400	3,4	12443	311,3	7				" "
5	40		52	416	3,4	12443	311,3	7	Paris	E	24	" "
6	50								Prag Prag	E		Fö
12	50		154	440	3,4	12443	311,3	7	Lyon 0	HE	16	Trafik mellan Sverige och Lyon
13	35		54	470	3,4	12443	311,3	7	"	"	40	" " " " "
17	20		58	464	3,4	12443	311,3	7				Stopp
18	15											Start
21	50											Klart för trafik
22	05		50	400	3,4	12443	311,3	7	Prag	E	10	
23	15		55	440	3,4	12443	311,3	7				Grimeton drift.

Tid Tim.	Min.	Ändrarvakt	Tid Tim.	Min.	Maskinvakt	Väderlek	Temperatur Ute	Inne	Vind Styrka	Riktn.	kW-timar max.	kWh-förbrukning Total	H. F.-gen.	Körtid i minuter Med fält	Utan fält
11	40		12	17		Dimma	+				I	I			
7	00	Nordström	7	00	Nilsson	Regn	2,8	13			394,6	40,50		1220	595
7	26		7	00							II	II			
12	26	A. Nilsson	12	00	Lindh	Mulet	3,9	19,5						1560	680
12	29		12	29											
23	29	Nordström	23	29	Nilsson	H. Klint	3,8	20	...		379,2	39,40		1450	140
														1230	1015

Dygnets max. temp. ute + / min. + /

Max. vindstyrka kl. . . m/sek.

Alla vindstyrkor på 130 m. höjd.

Grimeton den 17/3 19 48

Radiotelegrafist.

Antique Radio Club of America, Inc. and Museum of Radio and Technology, Inc.

Invites you to make plans to attend the **National Convention of** ARCA June 10-12, 1993.

This will be another major radio event ***featuring*** seminars by recognized speakers, large traders' market auction and Old Equipment contest.

If you can attend only one major radio event in '93, make it ARCA in Huntington, W.Va.

Sponsored by West Virginia Chapter.

Write to ARCA -'93,
c/o John Haught,
5268 Webb Street,
Aliquippa, PA 15001 or
phone (412) 378-4026.

AR/1300-AA/1400

(cont. from page 13)

construction techniques and have any chance of making a profit on the venture.

While the Westinghouse RA/DA receiver was in production by January 1921, research by John Anderson of the GE photo files indicate that the AR-1300/AA-1400 pre-production models were not complete until early February 1922. The production models were not ready for shipment until June 1922.

The tube sockets, audio transformers and phone jacks are the only major internal parts to be carried directly from previous designs.

The cabinets for these sets are referred to in GE documents as an "E-Z Case". The first engineering photo to show this cabinet style is identified as the AD-1527 "Detector VT" unit and is dated 26 July 1921. It is of solid brass except for the base plate which is some sort of zinc alloy. The zinc and brass parts are isolated by painted steel brackets.

The plug-in coil supplied provides a tuning range of 175 to 700 meters. An optional long wave coil (Model UL-1340) provides a tuning range from 650 to 1150 and 1450 to 2800 meters. (These coils must be very rare.)

The most impressive part of the receiver combination has to be the tuning capacitor. At first glance you might think that it is a dual section unit but it is only a single section unit. The designer of the receiver, Arthur Van Dyck, produced this novel design so that it would go from minimum capacity to maximum capacity in 360 degrees of rotation instead of the more conventional 180 degrees of rotation. The frame is copper plated cast iron. The rotor is supported by 26 ball bearings. All other components are nickel plated brass.

The AR-1300 is configured to be a complete crystal receiver. It has a PERIKON (two mineral-Zincite/Bornite) detector. These two mineral detectors seem to have been used because finding and maintaining a "sensitive spot" is much easier than with a galena/cat's whisker detector. However the efficiency of the PERIKON detector was such that this was no "DX" crystal set. The fact that most people that were willing to invest more than $50.00 in a crystal set were willing to go all the way and purchase the AA-1400, with its regenerative vacuum tube detector where the crystal detector is left out of the circuit, explains why so many of these units found today are missing the original detector parts.

The AA-1400 Detector/Amplifier as first manufactured for their commercial receiver systems consisted of three circuits; a RF amplifier stage, a detector stage and a single audio stage. However by the time this unit was first offered for sale as part of their broadcast receiver, the circuit had been changed to a detector stage followed by two audio stages. This

made it possible for the receiver system to drive a horn speaker to full volume.

There are two different versions of the etched brass nameplates at the bottom-front edge of the cabinets. Apparently the version label shown in "Radio Enters The Home" was used only on the first production run.

The first production runs of this set are painted the same dark olive green color being used on their shipboard equipment. The first GE photograph to show a wood top cover and bottom tray for the AR-1300/AA-1400 is dated 29 Sept. 1922. The cover and tray are made of poplar wood and are painted with black lacquer. This was apparently an afterthought to make the outfit appear "less industrial" in a home setting.

The AR-1300/AA-1400 is named the "Radiola V":

By December 1922 a further concession to fashion was to change the top cover and bottom tray to a red mahogany finish. The silver plated dial scales were replaced by adding dark brown finished brass skirts with photoengraved legends to the black bakelite knobs. At the same time the brass cases were given an imitation wood grain finish. It is most likely that this work was done outside of the GE factory since this finish did not appear on any later model radios or other consumer electrical products made by the company.

Not long after, the filament rheostats were changed to accommodate the UV-201A and the UV-199 vacuum tubes. In March of 1923 these sets were supplied with WD-12 tubes so as to make them work with #6 dry cell "A" batteries. GE would not make another receiver using storage battery powered tubes until the Radiola 16.

(The Radiola V shown in this article could possibly be called a "Radiola V + I" but that does not mean that it is a Radiola VI. This author found during cleaning of the AA-1400 that the two bakelite mounting strips for the three tube sockets were made from a scrap front panel made for a Radiola I!!!)

December 1923 advertisements claimed that over 20,000 of these outfits were in use. The Radiola V remained in the RCA product line until March 1924. By that time it was considered very out of date.

At the same time that the AR-1300/AA-1400 was named the Radiola V in December of 1922, the AA-1400 detector/amplifier unit was also paired with the AA-1520 three stage RF amplifier unit and given the name Radiola VI. This outfit required a large external loop antenna with a parallel tuning capacitor. With only a single tuned circuit and no regeneration circuit, your only reason for buying the Radiola VI would be because it would operate without an outside antenna. Because of this, less than 3,000 of the Raidola VI were manufactured.

My thanks to John Anderson, Alan Douglas, Ron Lawrence, Robert Buhelmann, R. D. Keyes, the GE Hall of History and the Charlotte Public Library for providing information for this article. ■

MEL'S CORNER

For some twenty years or more I have enjoyed writing this column on my favorite hobby - Wireless Radio!

I am reminded of several things that have kept me going in all these later years:

1. Your state of mind determines your state of health!
2. You either use it or you lose it!
3. Depression is the fate of a loser.
4. The Navy taught me: We strive to live, come what may. When the worst is over, "carry on"!

What would we all do without a bit of humor now and then? Comes to mind — an electrical publications by Lindsay Publications, P.O. Box 538, Bradley, Ill. 60915 — with the most illustrated and descriptive review of early radio books, wild inventions and weird devices you can imagine. Most important — it's FREE!
Look over this forty-five page catalogue. Who can pass up a 1914 Electro-Importing reprint catalogue for $7.95! If you were lucky enough to find an original of this rare catalogue at a radio meet, figure at least $20 - $25.

I am not in the catalogue business, but you will really get a kick out of this one — at the cost of just one postage stamp!

Well, the big annual radio meet of AWA is over and what did we find there? More and more new collectors and plenty of dealers with loaded vans of equipment! Plastics and cathedrals galore! All in line with the interests and age of the collector? Atwater Kent items hit a new horizon in scarcity and values. But, what ever happened to the real early items? The artifacts of history? Must be the collectors that still have them, hang on and on.

Here is where a new breed showed up this year at the meet — The Investor! He knows little background of these items - but he knows they will become valuable as time goes on! *Forbes Financial* magazine and *AARP* retired magazine both ran interesting articles with wide distribution on our antique hobby.

We are reminded of that period of time when the "Investors" entered into the collection of Antique Cars! In the 1950's or sixties, you could find a Model-T Ford for roughly $1,000-$1,500. Try and find one today — $5,000 - $10,000 or more!

I will never forget the day, about 1960, when I got a call — there was a Bugatti Royale in Florida available. Owner tired of looking at it, taking space in his driveway, asking $5,000 for it. I had no place at that time to park that huge monster. It was quickly sold to party after party, each doubling their investments as time went along. Last time I heard, it was finally sold at Kruse Auction for a mere eleven and a half million dollars!

Further recall about 1960, when a wealthy antique dealer in central

Pennsylvania took a shine to Atwater Kent breadboards, these were showing up at farm auctions between $5-$10, at the most. His barn finally became loaded as they collected more dirt and dust. The barn roof started to cave in. So out they went — mostly around $15. I figured a couple of these would be nice out in the garage. HI!

Does that tell us something? Investors now ask — "Are old radios really becoming collectibles?" Just a bit of investigation will sure give them an answer to this continually growing hobby!

Today there are many different categories of collectors. For instance, the beer-can collectors, now in the thousands! Barbed wire fence collectors! Glass insulators of various colors and shapes — folks climbing utility poles to find them on back roads! Look how far back in history people deemed paintings of great values! Untouchable today! Scarcity!

Later on, postage stamp collectors evolved into the millions! If an item becomes scarce, regardless of the category, there are always folks willing to save it. Why do we find attics of households so cluttered with everything imaginable? Always too good to toss out.

Where do our collectors find old radios today? Most usually as civilization progresses, they are the initial results of the "Savers" who could not bear to toss things away.

Nothing in this world is permanent. Things change!

We hear a lot about change today — with a new President about to take over. ■

Cheerio! ***Mel Comer***

LETTERS

This year we will concentrate on the fun events of radio collecting, such as swap meets and barbecues.

The Local Department of Education has created a special course on the History of Radio Broadcasting in Hawaii. This also includes the construction and operation of a radio station at Waianae High School. ARCA Hawaii is proud that it will be playing an intrigul part in this program.

—Leonard F. Chung, Past President

Dear Lloyd,

We would like to take this opportunity to let you know how much we enjoyed your museum and appreciate you taking the time to give us a guided tour.

We extremely enjoyed the tape recorder that recorded on wire. The 1940s (original) wire tape, *Lum and Abner,* played for us was amazing and outstanding. Now I know where the expression *Jot-Em-Down Store* came from.

We were also impressed by the first TV in Kanawha County (possibly in the whole State)— the condition of it was perfect.

We will recommend this outstanding museum to all.

Thank you for the experience,

—Wallace and Charlotte Vance

FREE ADS

Up to 12 *Gazette* lines of copy are available to ARCA members. We ask that you write your ad on a separate sheet of paper, typed or printed, and be sure to include your name and address. We reserve the right to edit all ads. ARCA is not responsible for any transactions, of course.

Owing to time constraints, we cannot extensively proofread names, addresses or numbers. If a mistake appears in your listing, please notify the *Gazette* and we will print a correction in the next available issue.

FOR SALE: Zenith floor model 2 band radio, circa 1940, model 68656, excellent working condition. Will Renninger (215) 855-1958.

****

WANTED: Literature. Copies or originals of installation/operating instructions/booklets/manuals for Packard Automobile Radios 1929-1956 (essentially all were Philco except 1940 - Stewart-Warner). Arlo Brakel, 201 Deer Meadow, Gahanna, OH 43230; (614) 337-1707.

****

WANTED: Rider Manuals #1, 20, 21, 22, and 23. Steve Kalista Sr., 9 Maple Drive, Jim Thorpe, PA 18229; (717) 325-4120.

****

FOR SALE: 1922 Aeriola Sr. model. Condition: Original and complete with tube, less headphones. The wooden case is in excellent shape. No cracks, no rat holes, no messed-up corners of case. The lid or top, has original snap, hinges and original very nice Westinghouse Electric and Mfg. Co. antenna and electrical operating connections and tuning instructions for best reception. Has four original small nails at each corner. Cardboard is not torn, cracked, nor any portion missing. Case has original finish, few minor scratches and has not been refinished or tampered with. Bottom of case still has four original small black pads on each corner. Price is $200 or best offer. Joe Nail, 1305 Amherst, Burkburnett, TX 76354; (817) 569-4876.

****

FOR SALE: 1939 Radio Diagrams & Servicing Information Book, 192 pages, Supreme Publications, $13 postpaid; Instruction Book for Radio Receivers BC-312-M & BC-342-M, Complete Diagrams & Parts List, 44 pages, $13 postpaid; Instruction Book, Collins Aircraft Transmitter ART-13, 354 pages plus other pertinent info, $25 postpaid. John P. Flanigan, RR 2, Box 455B, Elverson, PA 19520; (215) 286-6327.

****

WANTED: Porcelain based Rheostat, 3-1/2 inches in diameter. Usually made by Bunnel Co. Any condition. Mel Comer, 205 Roberts Road, Armore, PA 19003; (215) 642-5329.

****

ATWATER KENT: I can supply those mounting boards for the breadboard sets to exact AK specifications, either finished or unfinished at reasonable cost! Any size or model — most in stock. My specialty: I do custom woodwork from scratch or restorations, cabinets, etc. WANTED: AK components, most models. Trades or will buy them. Larry D. Barry, 212 N. 6th Street, Chambersburg, PA 17201; (717) 263-3804.

****

FOR SALE: Arvin 441T Hopalong Cassidy, Children's Novelty (red), works, add wire for better reception, light chips here and there, otherwise pretty good $320. Also many other radios, books and collectible tubes. Send two stamps for complete photo-list to Ron Boucher, P. O. Box 541 (GA), Goffstown, NH 03045; (603) 497-2988; COMPUSERVE #72440, 1356.

****

WANTED: Information on oriental design painting on post-World War II RCA 75X series radios; Grebe's "Dr. Mu," including any sayings by him, books about him, and ads; mid-1950's Stromberg-Carlson televisions with oriental-style cabinets; Splitdorf 1925 "Mikado" radio (with or without matching table), and "Geisha" radio, and "New Zenith Deluxe Chinese" (see pages 126 and 257 of "Radio Manufacturers of the 1920's, Vol. 3"). Gerald Schneider, 3101 Blueford Rd., Kensington, MD 20895-2726; (301) 929-8593.

****

FOR SALE: RCA Aeriola, Sr (1921) complete, to my knowledge, except batteries and antenna, in original box with instructions. This radio was pictured in the January 1992 "Audio" Magazine as shown in the Atwater Kent Museum, courtesy of Ralph and Elinor Williams. Asking $350, plus insured delivery by UPS, cash or P. O. money order. Ralph L. Coiner, 26170 W. 199th, Gardner, KS 66030; (913) 884-8894.

****

FOR SALE/TRADE: All new tubes in boxes. 872-A, VT 129/304TL, VT46-A, 866A, 24-G, VT136. Al Jenkins, 922 N. Country Plaza W., Gilbert, AZ 85234; (602) 892-5183.

****

WANTED: 2-6 meter Ameco transmitter for collection. Roll chart for Hickok 539B tube tester. Tad Drogoski N3J2Q, 507 Coal Valley Rd., Jefferson Boro, PA 15025-3703.

****

WANTED: Zenith printed materials from the 20s and 30s, including advertisements, pamphlets, owner manuals, signs, etc. Steve Melvin, 34 Deep Brook Harbor, Suffield, CT 06078; (203) 668-6821.

****

WANTED: These wide band RF transformers; Acme Type R-3 (need 2), Acme Type R-2 (need 1). George A. Freeman; WIKI; 102 E. Main St., Madison, IN 47250; (812) 265-6878.

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****

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****

WANTED: Tube cans to Crosley 516 and ballast tubes L49B, K55B. Zenith red ribbon cord for broadcast wavemagnet to Trasoceanic model 8G005YT. Gregory Sheppard, 4402 Jupiter St., Rockville, MD 20853, (301) 946-6460.

****

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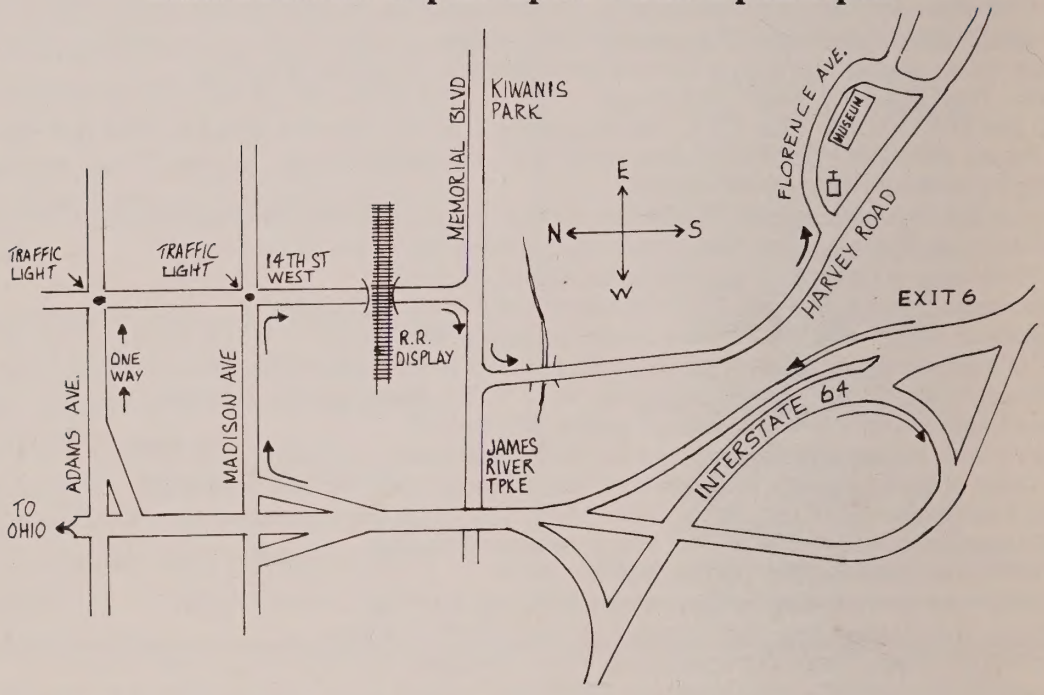

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